APR 7 1924

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

Entered as Second-Class Matter June 29, 1879, at the New York Post Office, Under Act of Congress, March 3, 1879.

FIFTY-SECOND YEAR

Published every Thursday by the Lockwood Trade Journal Co., Inc., 10 East 39th St., New York, N. Y.

Vol. LXXVIII. No. 14 NEW YORK AND CHICAGO, APRIL 3, 1924

Per Annum, $4.00
Single Copy, 10 Cents

"Good Pulp for Good Paper"

Paper manufacturers and their representatives attending the annual convention are cordially invited to take advantage of the facilities that our offices afford

Johaneson, Wales & Sparre, Inc.

WOOD PULP AGENTS

16 East 41st Street

New York

Telephone: Vanderbilt 1396

Cable Address: Goodpulp

The Taylor Stoker

The Ideal System of Generating Steam for Pulp and Paper Mills

THE TAYLOR Underfeed Stoker is rapidly becoming recognized as the stoker best adapted to the requirements and conditions of pulp and paper mill service.

The reasons why the "TAYLOR" is superior are clearly defined. It has certain features of design not found in other stokers that produce certain definite results essential to efficient paper mill operation.

For example, the Distributing Ram System which forms the entire bottom of the retort gives a flexibility and positiveness of control of the fuel from hopper to ash pit such as no other stoker can approach.

This exact control of the fuel gives to the Taylor Stoker the ability to get out of a boiler the most steam it is capable of generating and the ability to meet, with unequalled speed and certainty, the sudden and heavy fluctuations in steam demands that are characteristic of paper mill service.

There is not enough space here to enumerate the many other exclusive features of the TAYLOR Stoker which make it the cleanest, most flexible and most economic system for generating steam; but we give you the most conclusive evidence of "TAYLOR" superiority for the Paper Industry,—a representative list of pulp and paper mills that have standardized on the TAYLOR Stoker.

Note the large percentage of repeat orders. These are indicated by the *

Abitibi Power & Paper Co.
Iroquois Falls, Ont.
***American Box Board Co.**
Grand Rapids, Mich.
D. M. Bare Paper Co.
Roaring Springs, Pa.
***Bathurst Co., Ltd.**
Bathurst, N. B.
Belgo Paper Co.
Shawinigan Falls, Quebec.
Champion Fibre Co.
Canton, N. C.
Cherry River Paper Co.
Richwood, W. Va.
Colin Gardner Paper Co.
Middletown, Ohio.
Detroit Sulphite Pulp & Paper Co.
Detroit, Mich.
Filer Fibre Co.
Filer City, Mich.
Fletcher Paper Co.
Alpena, Mich.
***Fort Wayne Corrugated Paper Co.**
Hartford City, Ind.
Fox River Paper Co.
Appleton, Wis.
P. H. Glatfelter Co.
Spring Grove, Pa.
***Great Northern Paper Co.**
East Millinocket, Me.
Hinde & Dauch Paper Co.
Watertown, N. Y.
***Kimberly Clark Co.**
Kimberly, Wis.
Marathon Paper Mills Co.
Rothschild, Wis.
Miami Paper Co.
West Carrollton, Ohio.
***Oxford Paper Co.**
Rumford, Me.
***Parsons Paper Co.**
Holyoke, Mass.
***Poland Paper Co.**
Mechanic Falls, Me.
***Riordon Company**
Timiskaming, Quebec.
Hawkesbury, Ontario.
***St. Croix Paper Co.**
Woodland, Me.
St. Maurice Paper Co.
Three Rivers, Quebec.
***Union Bag & Paper Co.**
Cheboygan, Mich.
Valley Paper Co.
Holyoke, Mass.
***Wardlow-Thomas Paper Co.**
Middletown, Ohio.

W. L. Wescott, Chief Engineer of the Oxford Paper Co., made this statement about his Taylor Stokers: "These stokers have always done anything I asked of them and are thoroughly satisfactory in every way." No stronger endorsement could be given. It is typical of the enthusiastic approval of Taylor Stokers by all users in the Industry.

Facts and figures of unusual interest are contained in our FACTS-BOOK "Are Mechanical Stokers A Good Investment?" Send for a copy today.

American Engineering Company

2411 Aramingo Ave., Philadelphia

***Manufactured in Canada by* TAYLOR STOKER COMPANY, LTD., Toronto, Ont.**

Principal Sales Office: 416 Phillips Place, Montreal, Quebec

NATIONAL CHRYSOIDINE YP

It will produce your standard shade most economically

THE excellent shade and tinctorial strength of National Chrysoidine YP make it the logical selection for the production of the standard browns of boxboard.

Let us demonstrate its qualities, as a self shade or in combinations, on your stock.

NATIONAL ANILINE & CHEMICAL CO., Inc.

40 Rector Street, New York, N.Y.

Boston Philadelphia San Francisco
Providence Chicago Montreal
Hartford Charlotte Toronto

"NATIONAL" DYES
FOR PAPER

NATIONAL N DYES

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD
FIFTY-SECOND YEAR
Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.
LESLIE R PALMER, PRESIDENT · GEO. S MACDONALD, VICE-PRESIDENT & TREAS. · F. K. HOPPIE, SECRETARY
10 EAST 39TH ST. N.Y. U. S. A.
CHICAGO, 431 S. Dearborn St. · BOSTON, 127 Federal St.

TABLE OF CONTENTS

Copyright, 1924, Lockwood Trade Journal Company

Final Plans for Paper Week 45
Paper Trade Journal's Guide to Show 46
All Fine Grades in Strong Demand in Chicago 64
Satisfactory Outlook for Writing Grades 64
Coarse Paper Trade Slackens 64
Weaker Market on Paper Stock 64
Western Company Opens New Warehouse 64
R. P. Wood Represents Paper Utilities 64
Merger of Montreal Mills Seems Nearer 66
Brompton Gets New Wood Supply 66
Howard Smith's New Financing 66
Railways and Forest Protection 66
Increase in Pulp Wood Exports 66
St. John River Log Firm to Wind Up 66
Prizes Awarded Ontario Mills for Safety 68
Will Erect Kraft Pulp Mill 68
New Pulp Mill at Fort William 68
Would Improve Forest Products Laboratory 68
Niagara Plants Will Close for a Few Days 68
Federal Reserve Bank's View of Philadelphia Trade 70
W. J. McGarity, Jr., with Penn Co. 70
Cotton Waste Dealers to Dine 70
EDITORIAL 72
Fraud Laid to Paper Firm 73
New Mill Firms in Northwest 73
Hearings on Forestry Bill 73
Unions Ask Renewal of Present Wage 73
Forestry Bill Favorably Reported 73
TECHNICAL SECTION 75
COST SECTION 85
New York Trade Jottings 90
Imports of Paper and Paper Stock 92
Exports of Paper and Paper Stock 92
Bryant Paper Company Installs Will 94
Forest Research Council 94
To Discontinue Taking News Print Samples 97
D. W. Bergstrom to Build 97

MARKET REVIEW:
Market Quotations 96
New York Market Review 98
Miscellaneous Markets 100

Want and For Sale Advertisements, Pages 102, 3, 4 & 5

HAVE YOU CONSIDERED CAREFULLY THE BENEFITS OBTAINABLE FROM AMERICAN CLAY?

Small Stocks
30-Ton Shipments
Saving in Cost

Are you aware of the improvement which has been made in the quality and reliability of supply of American Clay?

Can you afford an increased cost of from 5 to 10 Cents per 100 lbs. in your product rather than make an exhaustive study of the use of American Clay?

Upwards of 150,000 tons of American Clay is being shipped to white paper mills annually.

We offer you the highest grades of American Clay of proven quality for filling or coating.

We offer you reliable service.

We have proven deposits and have made large capital investments to properly develop them. They include:

McNamee Clay, Crude and Pulverized.

Our well known Peerless Pulverized Clay for Paper, Board and Bag Coating.

Georgia Washed Clay of the highest color and quality.

Newsprint filling Clay.

Blue Ridge Pulverized Clay.

In the interest of economy in your own Mill advise us your Clay requirements. We will gladly work with you.

R. T. VANDERBILT COMPANY, Inc.
50 East 42nd Street, New York

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXVIII No. 14 NEW YORK AND CHICAGO Thursday, April 3, 1924

FINAL PLANS FOR PAPER WEEK IN NEW YORK

Recommendations to Be Made for General Reorganization of Financing Methods of American Paper and Pulp Association—Organization Now Free from All Indebtedness—Expect More Than 1,000 Persons to Attend Dinner—Seven of the Eight Living Former Presidents of Association to Meet at Luncheon—Woodlands Section Will Discuss Forest Fire Control and Wood Decay.

Recommendations for a general reorganization of the methods of financing the American Paper and Pulp Association, proposed a revision of the Association's program of activity, and a statement that the Association is for the first time in years free of indebtedness and ready to proceed under a budget of known income, will be an important feature of the forty-seventh annual convention of the Association, on Thursday, April 10. The recommendations will be made by a joint report of two special committees which have been working for months on the future activities and financing of the central association of the paper industry. The finance committee was under the chairmanship of Walter J. Raybold, former president of the Association, and the committee on activities and program under Norman W. Wilson, vice-president of the association. The report will be submitted for action at the forenoon business session on Thursday.

The committees completed their work during the past week, and the recommendations are now being put in form for submittal to the Association membership.

More Than 1000 to Be at Dinner

While this work has been going on, the plans for the more routine events of convention week have been proceeding without interruption, and it now seems certain that there will be more than 1,000 persons in attendance at the annual banquet, Thursday evening.

The forenoon program of discussions of business conditions has been completed, and the three main groups of the industry will be discussed by the following men: Pulp—E. W. Kiefer, Port Huron Sulphite Pulp and Paper Company. Course Papers—C. R. McMillen, Union Bag and Paper Company. Fine Papers—Charles McKernon, B. D. Rising Paper Company.

Another interesting feature of the program of the day will be the President's Luncheon at noon of convention day, when seven of the eight living former presidents of the Association will be the guests at a complimentary luncheon. The only missing one of the group will be E. C. Rogers, who was president from 1888 through 1889, and who feels that he can not get to New York this spring. The luncheon will be devoted to reminiscenes of early days in the paper industry, as several other men who have been long in the industry will be among the guests.

Program Shows Group Interest

The program of convention week indicates a considerable revival of interest in American Paper and Pulp Association work by groups which have not been working closely with the central association for some time past. The Converting Paper Mills Association has closed arrangements for cooperative work with the American Paper and Pulp Association, the new Boxboard Manufacturers Association has been accepted for membership as one of the affiliated associations, and the waxed paper manufacturers have scheduled a meeting which is likely to be followed by the reorganization of this group with considerable new strength added to the old time membership. The paper specialty manufacturers will meet during the week, for organization, and the Bristol Board Manufacturers Association, though not affiliated with the American Paper and Pulp Association has been aided in arranging a meeting during Paper Week.

Gummed Paper Men Consider Advertising

The Gummed Paper Manufacturers Association will consider an advertising campaign for the promotion of the use of gummed tape for sealing boxes and several other groups will take up business of interest to manufacturers of various grades of paper.

Meanwhile the salesmen are preparing for a busy day on Tuesday, as the big opening event of paper week. Ticket reservations have been coming in rapidly for the dinner and smoker, and already four tables of ten guests have been reserved. Chicago is sending a dozen or fifteen representatives, the Miami valley a proportionate number, while New England will be well represented.

On Wednesday, the Woodlands Section will hold its meeting, and will have two main subjects for discussion. One will be the problem of forest fire control, and the discussions will center on how the owners of pulpwood lands can co-operate with Federal and State officials, and lumbering organizations for a joint war on the fire demon. The other subject, which will be discussed in joint session with the Technical Association will be pulpwood decay, the woodlands section meeting taking up this subject from the woods side, rather than from the standpoint of the mill.

Discuss Woods Operations

The discussion will involve the operations in the woods, the work which may be done by the timber cutting crews in getting out wood which is partially decayed, and the co-operation of the woodlands operations with the mill in not taking out wood which is decayed to the point where it can not economically be utilized in the mill. Speakers on this subject will refer to the laboratory side of the problem, but the woods men will be most interested in the field work and its relation to the studies made of utilization by laboratory specialists of the Forest Products Laboratory.

PAPER TRADE JOURNAL'S GUIDE

To The

Second Annual Paper Industries Exhibition

Grand Central Palace, New York City

April 7 to 12, 1923

The EXHIBITS

This list is complete and accurate up to the hour of going to press, according to the records of the Show management and information obtained by the PAPER TRADE JOURNAL through questionnaires sent to exhibitors of record. Show visitors seeking information of any kind are invited to call at the PAPER TRADE JOURNAL, space 11.

American Paper Merchant.—Space 65.

American Schaeffer & Budenberg Corporation.—Space 82.

This exhibit will include this company's line of pressure and vacuum gauges, locomotive gauges, mercury gauges, gauge testers, dial thermometers, recording gauges and thermometers, regulators, controllers, tachometers, steam traps, valve indicators, indicating thermometers, etc.

Representatives in charge: H. V. Carlier, assisted by Mr. Undeutsch and Mr. Stark.

American Stationer and Office Outfitter.—Space 11.

Representatives in charge: A. A. Tanyane, advertising manager; Ashley D. Conger, editor; assisted by Henry J. Berger, A. S. Brown, H. J. Laughton, L. E. Thayer, A. J. Mueller and W. G. Kilner.

American Association of Paper Specialty Manufacturers.—Space 68.

This exhibit will be along educational lines, aiming to inform visitors of the general operations of the Association.

American Voith Contact Company, Inc.—Space 95.

A model of the Voith Caterpillar Grinder will be exhibited.

Representatives in charge: Several members of the company's office staff.

American Steam Gauge and Valve Company.—Space 82.

This company will show a very complete display of its indicating and recording thermometers, pressure and vacuum gauges, dial thermometers, recording gauges, temperature controllers, tachometers, counters, calorimeters, regulators, pop safety and relief valves, indicators, gauge testers, mercury gauges, steam traps, locomotive gauges, etc.

Representaives in charge: H. V. Carlier, assisted by Messrs. Undeutsch and Stark.

Armstrong Machine Works.—Space 58.

The magnet at this booth will be a glass model of the Armstrong Steam Trap working under steam pressure and so connected that the demonstrators can show the entire cycle of operation together with the manner in which the Armstrong Trap handles air and sediment. The other features of the Armstrong Trap will be clearly demonstrated through the operation of this model which is of interest to all users of steam traps and particularly where the use of an individual trap for draining each paper machine dryer is under consideration. A. E. Armstrong, who will be in attendance, has given a great deal of time to the investigation of the efficient drainage of paper machine dryers and will be glad to discuss the problem with all interested visitors who desire to obtain greater drying efficiency from their machines. He has done considerable experimenting with the handling of air from a paper machine dryer and the effects of air in the dryer and the results of his investigations are enlightening. He will be glad to explain the application of Armstrong Traps to paper machines either as individual units or as adapted to a complete drainage system.

Representatives in charge: A. E. Armstrong, assisted by Charles W. Gill, New York representative.

Archer, A. W., Co., Inc.—Space 64.

Cotton twine of all kinds, solid braided sash cord and solid braided clothes lines will form the exhibit at this booth.

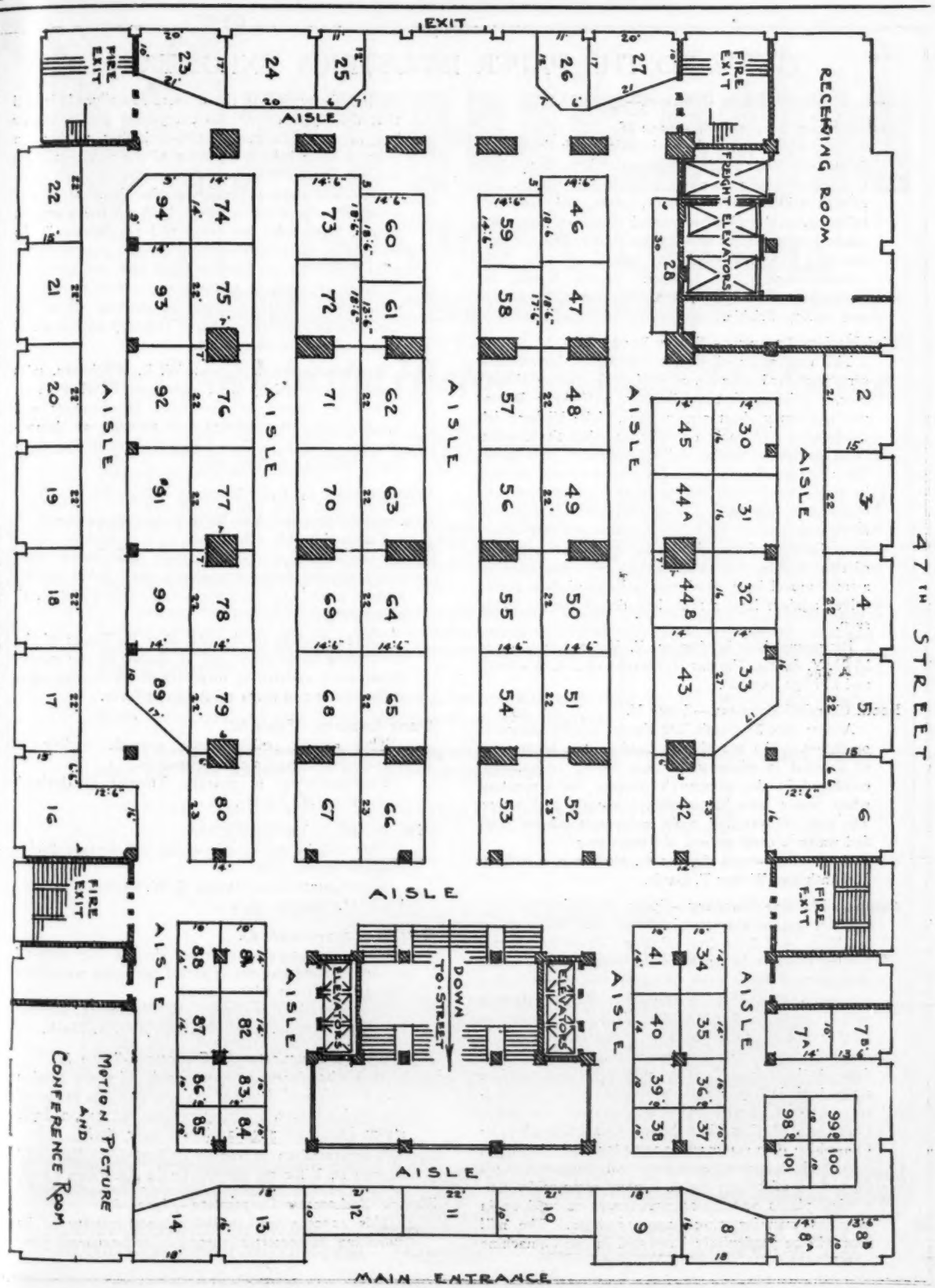
Representatives in charge: A. W. Archer, assisted by W. J. Nixon, M. E. Seddon and C. H. Reimer.

Atlas Publishing Company.—Space 101.

Bachmeier & Co., Inc.—Space 40.

Here will be exhibited aniline dyes and lake colors, both imported and domestic which are used in bleaching, tinting and coloring all grades and types of paper and allied products.

Representatives in charge: William C. Baur, general sales manager, assisted by Walter S. Bennett, Charles R. Laut, William Lindemann, Herbert Dengler, Edward A. Bobilin, Carl Bachmeier, E. M. Koch, William Bachmeier and John H. Bachmeier.



GROUND PLANT OF SECOND PAPER INDUSTRIES EXPOSITION

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

Beck, Charles, Machine Company.—Space 71.

Becker Paper Corporation.—Space 80.

This exhibit will be in conjunction with that of the Westfield River Paper Company, Inc., for whom the Becker Paper Corporation are selling agents. The exhibit will include glassine, plain and embossed celloglas, gold and silver coated glassines, cigarettes, candy boxes, bottles and articles illustrating the various uses to which glassine is put.

Representatives in charge: Albert Kyritz, Jr., assisted by Karl Becker, Gustav Becker, Louis Dozier and LeRoy Frisbie.

Bird Machine Company.—Spaces 50 and 51.

This company will show a Bird rotary inward flow screen, a Bird save-all, a Bird self-cleaning shower pipe, a Vickery felt conditioner, a Vickery Doctor and a Pulmax short center drive. The Vickery felt conditioner will be in operation so that those interested in it can see the real factors of it very easily. The Vickery Doctor will also be mounted so that its many advantages can be shown. The Bird self-cleaning shower pipe will be supplied with water so that its principle can be demonstrated under actual operating conditions. A very interesting arrangement of the Pulmax drive will be shown in the form of a small model from which comparisons of short center drives against longer open belt drives can be easily seen.

Representatives in charge: F. K. Becker, assisted by H. Y. Saxon, Thomas H. Daveby, Jr., R. W. Smith and Phillips Dennett.

Booth Chemical Company.—Space 34.

A new type 24 Booth Dry Feeder will be shown in operation. The machine is used in the application of Boothal to white water pulp saving coagulation, employed in the company's process for separating white water into its constituents—pulp and water. The pulp recovered is made into paper and the purified water is used instead of fresh water.

Representatives in charge: L. M. Booth, Louise E. McGrath and Walter T. Davis.

Cameron Machine Company.—Space 6.

These manufacturers of slitting and roll-winding machines, will show three of their Camachines, representing three main types for the production of small, medium and large rolls of paper and paper boxes. Camachine 6 will be in operation, actually making miscellaneous small rolls. The Cameron principle of slitting and winding, which is a characteristic of the entire line of Cameron machines, will thus be exemplified. A Camachine Type 10 will represent the middle stage, both in size of rolls produced and in the progress of development toward the high speed mill types, Camachine 12, Camachine 14 and Camachine 18. The Camachine 10, a standard machine for rolls of medium size, will demonstrate that a roll winder of this capacity is advantageous in a great many mills, converting plants and paper warehouses as well as in factories manufacturing paper products. The mill men will be particularly interested in the Camachine 18, the big brother in the Cameron family. It is said that the Type 18 will do everything that a winder has to do—plus some more—whether used as a prime winder behind the reels of the paper machine or as a rewinder for finishing room service. The exhibit will show a portion of the Cameron line of winders and rewinders which back up the Cameron slogan, "A winder for every roll requirement." In addition to the machines themselves, a representative exhibit of rolls of different sizes and various kinds of paper, all made on Camachines, will be shown. A new booklet describing and illustrating all of the Camachines used by the paper industry and its allied branches will be distributed.

Representatives in charge: W. B. Wilshusen, sales manager, assisted by J. B. Venturini, W. E. Blauvelt and J. E. Regan of the Sales Department; and Messrs. Schatten, Schiller and Hawkes as demonstrators. James A. Cameron, President of the Company, will also be present.

Canadian Ingersoll Rand Company.—Space 50.

Continental Paper and Bag Mills Corporation.—Space 62.

Featured in this exhibit will be such leaders of this company's products as grocer bags, paper sacks, coffee bags, glassine bags, wrapping papers, toilet papers, tissues, paper napkins, towels, egg cartons and O. E. envelopes.

Representatives in charge: Miss E. Bloom of the advertising department and D. Regan of the sample department, assisted by members of the various other departments and some of the sales force.

Crane Company.—Space 92.

This exhibit will include a wide variety of valves, fittings and steam specialties.

Representatives in charge: Thomas H. Ireland, assisted by M. Baxter, Jr.

Dick, R. and J., Inc.—Space 15A.

This will be an exhibit which will feature Dick's original Balata Belt.

Representatives in charge: H. W. Reynolds, assisted by J. M. Kearns.

Dorr Company.—Space 33.

This engineering concern will show a Dorr save-all of semi-commercial size in actual operation recovering waste stock from white water.

Representatives in charge: G. W. Repetti, assisted by M. C. Fleming, Carl Leander and H. A. Linch.

Downingtown Manufacturing Company.—Space 57.

At this booth will be seen a model of a new suction roll, a section of the bandless beater roll, a model of the duplex beater, a copper-covered felt roll, a dryer steam joint and a collapsible winder shaft.

Representatives in charge: Charles L. Ellis and George D. Kilberry, assisted by L. S. Barker.

Electric Tachometer Corporation.—Space 48.

This concern will exhibit a great variety of its indicating tachometers, recording tachometers, port-

MATHIESON System

An Epoch in the History of Liquid Chlorine

THE recent decision of the Interstate Commerce Commission, giving tank car rates and privileges to the Mathieson Multi-Unit Chlorine Gas Tank Car, marks an epoch in the history of Liquid Chlorine.

The Multi-Unit Car, designed by our engineers, carries fifteen one-ton units of Liquid Chlorine instead of a single fifteen-ton tank. When we placed this special car in service over two years ago, the railroad companies refused to allow us tank car rates. We appealed to the Interstate Commerce Commission for removal of this discrimination and continued making shipments in the Multi-Unit Car.

During the past two years we have paid out over two hundred thousand dollars in excess freight charges in order that the chlorine-consuming industries might benefit by the continued service of a tank car ideally constructed for the safe, economical and convenient use of Liquid Chlorine.

The present decision of the Commission upholds our faith in the Multi-Unit "Safety First" principle and awards us full reparation with interest.

Thoughtful consumers will recognize in this case a further proof of the leadership we have assumed in the chlorine industry.

You are cordially invited to visit us in our booth No. 41 at the 2nd Paper Industries Exposition, at Grand Central Palace, New York City, April 7th-12th, 1924.

The MATHIESON ALKALI WORKS Inc.
25 WEST 43rd STREET NEW YORK CITY
PHILADELPHIA PROVIDENCE CHICAGO CHARLOTTE

EAGLE THISTLE PRODUCTS

Deal Direct with the Manufacturer

Bicarbonate of Soda
Liquid Chlorine-Caustic Soda
Sesquicarbonate of Soda
Bleaching Powder-Soda Ash

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

able tachometers, position indicators and water level recorders.

Representative in charge: P. van Santen Kolff.

Electro Bleaching Gas Company.—Space 10.

This booth will be fitted for the convenience of the Electro Bleaching Gas Company's customers who will be given complete information on Liquid Chlorine. Booklets will also be distributed.

Representatives in charge: S. W. Jacobs and W. T. Weed.

Faatz Manufacturing Company.—Space 12.

This exhibit will include the complete line of belt dressings manufactured by this company. This takes in three grades of liquids and a bar to meet all belt requirements.

Representative in charge: J. B. Faatz, president.

Farnsworth Company.—Space 46.

An interesting exhibit which will include the Farnsworth Paper Drying System, Farnsworth Pistonless Condensation Pumps, and Farnsworth Boiler Feeding System.

Representatives in charge: F. C. Farnsworth, assisted by H. D. Jones.

Foreign Paper Mills, Inc.—Space 84.

Here will be found an interesting exhibition of the Schopper standard paper testing instruments. Demonstrations will be made of their diverse uses in the industry.

Representatives in charge: H. Z. Schniewind, president, assisted by J. G. Voltmann, secretary, G. Mollberg and Miss C. Weiant.

Frederick Engineering Company.—Space 89.

This company will exhibit in conjunction with the Frederick Iron and Steel Company. The exhibit will include two small Spirex vacuum pumps, one high efficient, open impeller; a super stock pump and one two stage hydraulically balanced boiler feed pump.

Representatives in charge: A. L. Brice, assisted by T. J. O'Connor.

Frederick Iron and Steel Company.—Space 89.

This exhibit will be in conjunction with that of the Fredeick Engineering Company and will include two small Spirex Vacuum pumps, one high efficient, open impeller; a Super Stock pump and one two-stage hydraulically balanced boiler feed pump.

Representatives in charge: A. L. Brice, assisted by T. J. O'Connor.

General Electric Company.—Space 16.

Here will be shown a sectional drive for paper mill installation, a model of an electric steam generator and an electrically operated flow meter.

Representative in charge: C. T. McLoughlin.

Gibbs-Brower Company.—Space 61.

This company's representatives will be on hand to explain the company's service in connection with the buying and selling of mills in its Paper and Pulp Mill brokerage department. The "Go Between" bulletin service to the Paper and Pulp mills in the disposal of and locating of used paper and pulp mill machinery will also be explained and the company's representatives will also be prepared to offer to prospective buyers many Paper and Pulp mills which are for sale and also a varied list of available used paper and pulp mill equipments.

Representatives in charge: Ogden Brower, Jr., assisted by Miss Vera Langfeldt.

Goodrich, B. F., Rubber Company.—Space 44A.

Among the features of this exhibit will be a Goodrich "Cutless" bearing in actual operation with only water as a lubricant. There will also be shown a high speed news press roll, after nine months in operation without showing any corrugation. Visitors will be permitted to make plastometer tests. The exhibit will also include the new Goodrich "1788" transmission belt which is a vast improvement over all present types for paper mills.

Representatives in charge: Salesmen from various points in the paper industry territory.

Greeting Card Association.—Space 69.

Greeting card handlers will find this exhibit full of interest to them for here will be displayed a varied assortment of association advertising, various suggestions designed as dealers' helps and a wide line of greeting cards.

Representatives in charge: R. W. Hicks, secretary and treasurer, assisted by W. S. Goodwin.

Gurney Ball Bearing Company.—Space 2.

This exhibit will consist of ball bearing mounting for breast roll.

Representatives in charge: J. H. Banninger, assistant chief engineer, assisted by D. K. Hatch, Springfield representative and M. T. Denslow, Philadelphia representative.

Hammermill Paper Company.—Space 52 and 53.

Visitors will find a varied and complete display in which the paper-making process at the Hammermill Paper Company's plant will be demonstrated and where specimens will be shown of all the different lines of paper that are produced, as well as some of the company's conversions and adaptations to general business requirements.

Representatives in charge: Members of the advertising department.

Hardy & Sons, William A., Company.—Space 25.

A complete line of newly designed bronze blow-off, "Y," swing check and globe valves designed especially for use in Sulphite Digester equipment. The exhibit will also include cast bronze, rolled phosphor bronze and copper screen plates.

Representative in charge: Alfred C. Anderson, master mechanic, assisted by John A. Murray.

Hercules Powder Company.—Space 37.

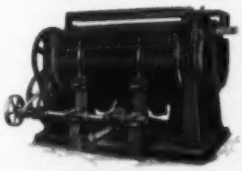
Hoe Corporation.—Space 86.

At this booth will be shown the Hoe Wrench which is made in five regular sizes and which has for its chief characteristic instantaneous adjustment, positive

Booths 50-51

Paper Industries Exposition

We shall be glad to tell you how—



BIRD SCREENS

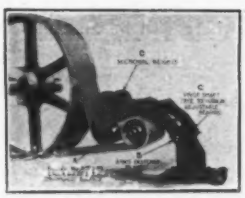
Increase production
Improve quality of stock
Save operating expense
Save labor

VICKERY FELT CONDITIONERS

Eliminate felt washing
Increase production
Improve the quality of the sheet
Increase life of felts

BIRD SAVE-ALLS

Detect leaks
Save pulp
Filter white water



PULMAX DRIVES

Stop belt slippage
Save belting
Save floor space
Save power
Save trouble

BIRD SELF-CLEANING SHOWER PIPES

Save stock and water

OTHER ITEMS OF BIRD MACHINERY FOR PAPER MILLS:—

Walpole Screen
Bird Thickener
Bird Continuous Beater Attachment
Bird Water Filter

BIRD MACHINE COMPANY

South Walpole - Massachusetts

Western Representative:
T. H. Savery, Jr., 1718 Republic Bldg.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Ltd.
260 St. James Street
Montreal, Canada

BIRD MACHINERY

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

grip, slip prevention, ideal ratchet movement, strength, durability, simplicity.

Representatives in charge: A. Bowie, Jr., assisted by Robert Baines and Charles R. Howroyd.

Hughes Publishing Company.—Space 83.

Kellogg & Co., P. P., Division.—Space 52.

Keystone Lubricating Company.—Space 81.

A very complete exhibit of the Keystone Safety Lubricators, Keystone paper mill greases will be amplified by photographs of installations made by the Keystone Company.

Representatives in charge: F. D. Street, assisted by C. O. Norstrum, A. T. Lowry and C. T. Moyer.

Kleen Products Company, Inc.—Space 78.

A complete line of fiber spoons and forks, paper plates and luncheon sets made by this company will be shown.

Representatives in charge: H. L. Hartman, secretary and treasurer, assisted by Richard Whitall, sales representative.

Leather Belting Exchange.—Spaces 74 and 75.

A demonstration machine will show how belts transmit power and the relative values of the different types of belting for power transmission. This demonstration machine is a highly developed piece of scientific mechanism from which the observer can determine for himself the various facts regarding the belt being tested. In addition there will be an exhibition of a leather belt running in water, and of leather belts being made endless on the pulleys. The exhibition will be purely educational for the Leather Belting Exchange has nothing to sell but is only interested in distributing to the general public the results of the work which has been done at its Research Laboratory which has been conducted for a number of years at Cornell University.

Lehigh Lime Company.—Space 9.

Here will be shown specimens of limestone, lump line and Hydrated chemical lime together with charts showing the physical and chemical analysis of this company's products and the various uses for which the Lehigh lime is adaptable.

Representatives in charge: O. L. Cook and L. A. Dahl.

Locke Regulator Company.—Space 28.

Pressure regulators, pump governors, reducing valves, paper drying regulators, engine stop and speed limit systems, water regulators, etc., will comprise this exhibit.

Representatives in charge: J. C. C. Harris, manager, assisted by F. R. Eliason, superintendent, and W. A. Heaney, assistant superintendent.

Lockwood's Directory of the Paper and Allied Trades.—Space 11.

A. A. Tanyane, advertising manager, assisted by Henry J. Berger, editor, A. S. Brown, H. J. Laughton, L. E. Thayer, A. D. Conger, A. J. Mueller, and W. G. Kilner.

Lockwood Trade Journal Company.—Space 11.

Representatives in charge: A. A. Tanyane, advertising manager, assisted by Henry J. Berger, A. S. Brown, H. J. Laughton, L. E. Thayer, A. D. Conger, A. J. Mueller and W. G. Kilner.

Lubriko Company.—Space 95-A.

This company will exhibit as its leader "Lubriko 7 X Brick Grease" for use on very hot dryer bearings. This will be put up in the company's regular shipping cases. The exhibit will also include the company's 7 X grease on an actual dryer bearing, heated by electricity and motor driven. This will demonstrate, as nearly as possible, the working conditions on the dryer rolls. The Lubriko lower heat test paper mill greases will also be shown.

Representatives in charge: W. Hillyard Gage, assisted by William R. T. Kolp.

Mathieson Alkali Works, Inc.—Space 41.

At this booth will be exhibited a large model of the Mathieson multi-unit chlorine gas tank car which has recently been improved in an important decision of the Interstate Commerce Commission. The model will illustrate the many unique features of the multi-unit car, together with the unloading by means of a manifold and headers. A full-sized Mathieson ton container, as used on this car, will also be on exhibition, sectioned at one end to show the construction in detail. Other exhibit material will include literature describing the Mathieson System for preparing bleach liquors from liquid chlorine, and samples of "Eagle Thistle" caustic soda, soda ash and bleaching powder.

Representatives in charge: R. J. Quinn, assistant manager of sales, assisted by J. D. MacMahon and G. N. Davis.

Mayer Coating Machines Company.—Space 71.

At this booth there will be available for distribution full descriptive particulars and illustrations of the various coating machines manufactured by this well known concern, including wax coating and oil saturating machines, gumming and gluing and varnishing machines, asphalt coating and duplexing machines, clay coating and color coating machines, etc. This progressive concern leads the way in the designing and manufacture of paper coating and saturating machines of various kinds and have recently added to their line several new machines including clay coating machines and machines for the treatment and saturation of paper with special solutions of different kinds and consistency to meet individual requirements. They have now completed arrangements in their Experimental and Research Department for the special treatment or coating of paper on an experimental scale in the interests of those patrons who may wish to try out in a practical way new ideas in paper coating and saturation. Work of this kind is taken without any obligation whatever on the part of clients to purchase a machine.

Representative in charge: Charles W. Mayer, treasurer.

VOORHEES RUBBER MFG CO.
Jersey City N. J.
TRADE MARK

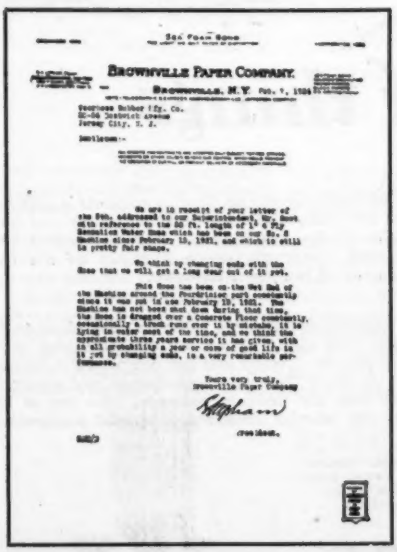
BELTING COST CUT FROM 1 3/4 to 3/4c by the use of Sensation Belt.

These figures were obtained as a result of the experience of one of our customers Oct. 1923. The belt is still in service and daily reducing the cost and increasing this phenomenal record or an exceptionally difficult drive.

The Sensation Line

Rubber Goods of Ultimate Economy

SENSATION Hose records are second to none.



BROWNSVILLE PAPER COMPANY.

This letter is complete in itself.

The hose will be on exhibit at the Paper Show.

The transmission belt with a UNIVERSAL RECORD

PAPER INDUSTRIES EXPOSITION
Booth 88
April 7-12-1924

We cannot show the entire line of Westinghouse paper mill equipment at the New York Show, so we have selected sectional paper machine drive. Come and see a section driving unit in operation.

Men Who Go ~ to the bottom of things

IF the problems, processes and manufacturing operations of all the industries of this country were alike, then the life of the electrical designing engineer would indeed be Utopian. He could develop one standard and apply it to all.

But an example to the contrary is the pulp and paper industry. Here stock is handled in liquid form, through numerous pumps, grinding, mixing and screening operations until it reaches the paper machines, which in themselves are examples of highly perfected continuous process fabrication.

Hence the problems the application engineer is called upon to solve are many and varied and he has proved himself invaluable in the development of Westinghouse motors and control equipment which lives up to the special requirements of the paper industry.

These application engineers come to your plant to learn conditions first-hand. They are the men who are not afraid to put on overalls and get down to the bottom of things. It is at their recommendation and under their guidance that the designer proceeds. No one is better fitted to say whether standard or special constructio is

Westinghouse Electric & Manufacturing Company
East Pittsburgh Pennsylvania
Sales Offices in All Principal Cities of the
United States and Foreign Countries

Westinghouse

required nor better able to assemble into a harmoniously working whole the different Westinghouse electrical apparatus necessary to paper-making processes and operations.

Familiarity with your manufacturing processes and requirements and intimate knowledge of electrical apparatus enable these men to sense the need for and manner of applying improved methods. Sectional paper machine drive, pulp grinder load regulators, dual frequency super-calender drive and paper plater drive are outstanding examples of Westinghouse application engineering. No company could hope to accomplish the same results without the aid of application experts who have at their disposal every facility for designing, building and perfecting.

Electrical power is your means of eliminating the non-productive motions in your manufacturing processes and in obtaining maximum quality-quantity production at minimum cost.

The Westinghouse engineering organization is always ready to cooperate with you in the solution of electrical power problems. Meet our application experts at the Paper Industries Convention and become better acquainted with these men and their work.

Westinghouse Electric & Manufacturing Company
East Pittsburgh Pennsylvania
Sales Offices in All Principal Cities of the
United States and Foreign Countries

Westinghouse

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

McGrath-Sherrill Press.—Space 57.

This exhibit will be a presentation of direct-by-mail printing pieces and general advertising printing in the way of sample books and sample cabinets.

Representatives in charge: Edgar B. Sherrill, assisted by Everett A. Sherrill.

Midwest Air Filters, Inc.—Space 48.

Midwest Air Filters will be shown, demonstrating how they are used to clean their air, how they are used on electrical equipment, air compressors and internal combustion engines. The exhibit will also offer a Midwest Air Filter installation showing how the quality of paper may be improved by the elimination of dust and how working conditions may be improved.

Representatives in charge: C. E. Green and A. M. Goodloe.

Mixing Equipment Company, Inc.—Space 71.

This exhibit will consist of electric portable mixers for fluids and fluid products.

Representatives in charge: F. L. Craddock, assisted by F. R. Schell and J. J. O'Shea.

Nash Engineering Company.—Space 42.

National Aniline and Chemical Company.—Space 8-A.

Here will be shown a particularly interesting exhibit of dyes for paper, colored pulps, etc. There will also be displayed a wide range of colored paper showing every branch of the paper colorer's art.

Representative in charge: Dr. L. J. Matos, chemist, assisted by technical representatives from the several branches of the company.

National City Paper Corporation.—Space 84.

A general display of the various grades of paper handled by this organization, including bond papers, ledger papers, bristol board and complete line of papers.

Representatives in charge: H. Z. Schniewind, president, assisted by J. G. Voltmann, secretary, G. Mollberg and Miss C. Weiant.

New York State College of Forestry.—Space 22.

By means of this exhibit visitors will be shown the value and need of reforestation for raw materials of the paper industry. A graphic description will also be given of the course in pulp and paper manufacture as given at the New York State College of Forestry at Syracuse University. This will be done by stereomotorgraphs, illuminated transparency, graphic charts, photographs, mounts of planting stock, etc. Those in charge of the exhibit will be ready at all times to give information on various phases of forestry. There will also be available publications of the college on several topics of interest to forest land-owners and pulp and paper manufacturers.

Representatives in charge: G. H. Lentz, assisted by G. E. Peterson.

New York Employing Printers' Association.—Space 76.

This will be a general printing exhibit designed to prove of more than passing interest to all branches of the paper industry.

Representatives in charge: William L. Roberts, managing director.

Norma Company of America.—Space 31.

This company will exhibit the "Norma" precision open type annular ball bearings; "Norma" precision closed type annular ball bearings; "Norma" ball thrust bearings; "Norma" minimeter, a precision measuring instrument; "Hoffmann" precision roller bearings, standard and self-aligning; "Hoffmann" ball thrust bearings.

Representatives in charge: D. E. Batesole and F. W. Mesinger, assisted by A. Meder and E. W. Lawrence.

Oliver Continuous Filter Company.—Space 5.

The Oliver Continuous Filter will be exhibited and thorough demonstrations made of the Oliver efficiency and economy. There will be available data at hand for those interested in the use of Olivers for brown stock washing in soda and sulphate pulp mills; the thickening of pulp to any desired density up to 30 per cent air dry; recovering of over 95 per cent of the pulp from white water; the handling of lime mud from causticizing operation in soda and sulphate pulp mills.

Representatives in charge: J. F. D'Antonio, Charles Fuhrmeister, Jr., Frederic J. Griffith, H. A. Morrison and R. G. Walker.

Oneida Chuck Company.—Space 32.

New patented chuck for holding Jumbo rolls wound on paper cores will be shown at this booth. This is designed to eliminate the use of wood, iron and metal-tipped cores. It is used by News print users, converters and mills for inter-plant work and allows the use of cheap non-returnable paper core without loss of paper.

Representatives in charge: J. A. Lamotte, assisted by C. L. Hodgman.

Oswego Falls Corporation.—Space 44-B.

Paper Industry.—Space 79.

Paper Making Chemical Company.—Spaces 19, 20 and 21.

This exhibit will be made in conjunction with the Western Paper Makers Chemical Company. A complete line of the company's products will be on display and there will be a special demonstration of hand-made paper making by Dard Hunter.

Representatives in charge: Ralph N. Snell and W. J. Lawrence, assisted by James Foxgrover, C. H. Kent, E. J. Johnstone and Alex Duncan.

Paper Trade Journal.—Space 11.

Representatives in charge: A. A. Tanyane, advertising manager; Henry J. Berger, editor; assisted by A. S. Brown, H. J. Laughton, L. E. Thayer, A. D. Conger, A. J. Mueller and W. G. Kilner.

Paper Mill and Wood Pulp News.—Space 35.

Pennsylvania Salt Manufacturing Company.—Space 36.

Included in this exhibit will be liquid chlorine, bleaching powder, Natrone Porona (iron free), commercial alums and caustic soda.

See This Equipment

1. The Voith Stock Inlet.
   (In Miniature)
   Speeds-up-Production, improves quality, eliminates foaming and slices, adds length to the wire for formation purposes, and insures uniform caliper across entire width of machine.
2. The P.A.P.A. Screen.
   (In Miniature)
   A really successful Inward Flow Rotary Screen for both pulp and paper. Screens more and better stock with less power.
3. The Laboratory Beater.
   An exact Replica of large sized engines.
4. The Valley Size Tester.
   Gives a unit of measure for sizing. Saves on size and alum and keeps size more constant during a run and from run to run.

Visit Booth No. 80

Do not fail to see the interesting exhibit briefly described above, at the Second Annual Paper Industries Exposition, April 7 to 12 in New York City. It may open the way to greater profits and a better product for you.

Valley Iron Works Company

Plant:
APPLETON, WISCONSIN

New York Office:
350 MADISON AVENUE

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

Representatives in charge: N. E. Bartlett, assisted by F. G. Rodenburg, H. K. Davies and J. A. Kinney.

Permutit Company.—Space 43.

The principal and most interesting exhibit of the company will be a small size Permutit water softener. The Permutit apparatus occupies very little space in the plant and its simple operation does not require a skilled mechanic. This company is the largest exclusive manufacturer in the world of all types of equipment for treating water to render it pure, soft and correct for all manufacturing purposes.

Representatives in charge: A. T. Smith, R. W. Epple, D. J. Saunders, and A. F. McConnell, all members of the New York office staff.

Potdevin Machine Company.—Space 28.

These manufacturers of paper converting machinery will have in operation some of their pasting, gumming and gluing machinery for edge, strip and solid surface covering of paper, cardboard, cloth and similar materials in sheets. Here will also be operated one of the company's Type 248 two-color printing flat and square glassine paper bag machines and will distribute postage stamp bags made thereon directly from a roll of paper at the rate of 100,000 daily. At the booth will also be found photographs, specifications, samples, etc., of the company's paper waxing, envelope and other paper converting machinery.

Representatives in charge: Walter V. Hunter, assistant to the president, and Charles Schaefer, manager of the Gumming Machine Department.

Pulp and Paper Magazine of Canada.—Space 13.

Purity Paper Vessels Company.—Space 65.

This company will present an interesting display of "Purity" paper cans and "Pavesco" paper milk bottles and of all the improved appliances used for the furtherance of their use.

Representatives in charge: Allyn G. Whitehead, assisted by John A. Owen, Jr., and William A. Palmer, vice-president and general manager, W. R. Lenderking will also be in attendance.

Reed Air Filter Company.—Space 93.

Ross, J. O., Engineering Corporation.—Space 9-A.

These exhibitors will show a model of a vapor absorption system on a paper machine in connection with Briner economizer.

Representatives in charge: Mr. Clark, assisted by Mr. Fletcher and Mr. Shultz. ....

Sandusky Foundry and Machine Company.—Spaces 60, 72 and 73.

An exhibit consisting of one or more 36-inch diameter drilled shells for Millspaugh suction couch rolls and probably shells showing press drilling. Millspaugh shower pipes and foam sprays and Millspaugh patented suction slice pipes will also be shown. A feature of the exhibit will be one or more cycloidal vacuum pumps which the company is about to place on the market. They are of new design and with special fittings. The display will include Sandusky fluid-compressed brass, bronze and copper tubes. Cast copper as well as brass and bronze rolls will be included in the display as well as some unique samples of thin wall tubing made by the company's process; samples of rugs, oilcloth, mohair, plushes, etc., which are being printed over the company's cylinders. There will also be photographs, bulletins, etc., to illustrate the company's tubular products. Another feature will be a cast iron winder drum mounted on roll ball bearings which will probably be in action hooked up to an electric motor. This will show the anti-friction roll ball bearings for rolls and dryers.

Representatives in charge: President Millspaugh assisted by members of the sales staff.

Seaboard Air Line Railway.—Space 8.

There will be much in this exhibit of general interest. Typical wood found in Southern territory will be shown with various types of paper made from Southern woods and complete data as to desirable location for a paper industry in Seaboard territory. The exhibit will also include a display of clay and rosin sizings for use in paper manufacture.

Representatives in charge: P. A. Barr, assisted by E. D. Mays.

Sealright Company, Inc.—Space 44-B.

This company will exhibit many of its outstanding products including a line of the Sealright liquor-tight paper containers, paper butter tubs, paper milk bottles and milk bottle caps.

Representatives in charge: Dr. Wilbur L. Wright, president, assisted by George F. Vogt.

Seminole Chemical Company, Inc.—Space 85.

This company will have an educational exhibit which will make plain the Seminole method of cleaning boilers, stressing every essential step in the operation and making plain the thoroughness of the method.

Representatives in charge: Leo Sherman, assisted by Thomas L. McKenna, chief chemist; Emerson L. Lyford, H. W. Hall and R. F. Carton.

Shepard Electric Crane and Hoist Company.—Space 2.

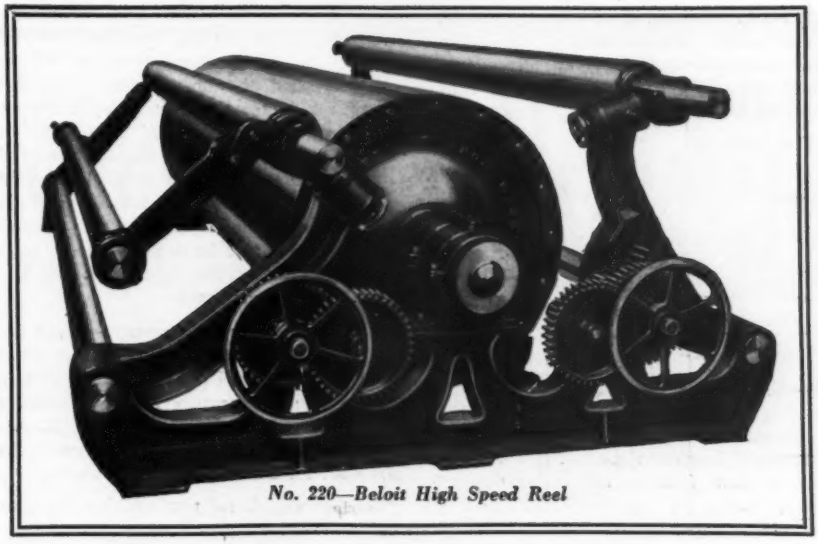
An electric lift-about hoist will be shown in operation and there will be a display of enlargements from photographs taken of actual installations of electric travelling cranes, cage-controlled mono-rail hoists and single I-beam type electric hoists in the plants of paper manufacturers.

Representatives in charge: Robert T. Turner, assisted by A. J. Barnes, S. A. Meddaugh, Roy W. Hurst and Roscoe C. Vaughn.

S K F Industries, Inc.—Space 17.

In this display will be shown a range of "Skapef" self-aligning and Hess-Bright ball bearings and the step operation of ball bearings and Atlas steel balls will be demonstrated. There will also be exhibited ball bearing housings for table rolls, dryer felt rolls and Fourdrinier wire and press felt rolls. Another interesting feature will be a large "Skayef" self-aligning ball and spherical roller bearing. By means of

BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS



No. 220—Beloit High Speed Reel

Insure Yourself Against Loss of Paper, Accidents, Inefficiency

THE BELOIT UNIFORM SPEED REEL effects a saving of paper every time you change reel drums. It displaces the old obsolete method, and insures steady, reliable performance plus absolute assurance of economy of operation. Furthermore, it entirely eliminates the danger of drawing men between reels of the conventional upright type, effecting a further saving in man power and accident liability. It can be depended upon to wind a beautiful roll that is very uniform in hardness.

Moreover the extra refinements added to this reel make it much handier than any of similar design. An instance of this is the ease with which paper is started on the drum. The passer does not have to change hands when performing this operation. Its simplicity and ease of operation is a revelation.

Let us know the face of your calender rolls and we will gladly submit a figure covering your particular case.

Beloit Iron Works BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS **Beloit, Wis., U. S. A.**

Established Since 1858

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

models will be shown the anti-friction qualities of ball bearings. Engineers will be on hand to answer questions about the application of ball and roller bearings to paper machinery.

Representatives in charge: R. H. DeMott, general sales manager; H. E. Brunner, chief engineer; G. H. Spencer, Pulp and Paper Department; J. C. Gayler, Pulp and Paper Department; R. C. Byler, advertising manager. The company will have headquarters at the Waldorf-Astoria.

Smidth & Co., F. L.—Space 90.

The Lenix belt drive will be shown here in its various applications including the beater drive, constant line drive, etc. At this booth will be shown how power may be saved by avoiding slippage, how space may be saved by shortening pulley centers and how many belt worries may be minimized.

Smith and Serrell.—Space 94-A.

Southern Kraft Manufacturers.—Space 67.

Tidewater Oil Sales Corporation.—Space 98.

A complete line of lubricating oils and greases especially manufactured for the lubrication of paper making machinery will be shown here. The company will also exhibit in chart form an interesting discussion of the lubrication of the Fourdrinier machine.

Representatives in charge: A. K. Nelson, Eastern industrial oil supervisor, assisted by P. F. Cassidy.

Tyler, W. S., Company.—Space 3.

All types of woven wire screen used in the manufacture of paper will be shown here together with the HUM-MER electric screen and testing sieves.

Representatives in charge: Albert E. Reed and Harry D. Frost.

Union Bag and Paper Corporation and associated companies and branches.—Spaces 54-55.

An interesting display will be shown here including logs, pulp, news print, wrapping paper, paper sacks and a wide variety of paper bags, including grocery, odd, fancy and special made to order bags. It will be the largest, most varied and graphic exhibit the concern has ever attempted.

Representative in charge: H. Stuart Daniels, manager of the special sales department, assisted by the following members of the staff of the New York Sales offices.

12 Noon until 3:30 P. M.—H. S. Daniels, Monday; Walter L. S. Alexander of the Specialty Sales Department, Tuesday; William C. Mansfield, manager of Grocery Bag Department, Wednesday; E. M. Gardner, manager of Wrapping Paper Department, Thursday; Henry W. Cressy, vice-president of St. Maurice Sales Co., Ltd., Friday; E. J. Rose, New York city sales force, Saturday. 3:30 P. M. until 7 P. M.—Mr. Daniels, Monday; Mr. Cressy, Tuesday; E. A. Walters, New York City sales manager, Wednesday; Mr. Rose, Thursday; F. W. Parker of Columbia Bag and Paper Corporation, Friday; Mr. Alexander, Saturday. 7 P. M.—Until 10:30 P. M.—Mr. Gardner, Monday; Mr. Rose, Tuesday; Mr. Parker, Wednesday; Mr. Mansfield, Thursday; Mr. Walters, Friday; Mr. Daniels, Saturday.

Union Sulphur Company.—Space 38.

Representatives in charge: W. N. Wilkinson, assisted by A. McLintock and R. T. Nixon.

United States Testing Company, Inc.—Space 39.

An actual demonstration will be given at this booth of the more popular tests on paper. This will include tests to determine the tensile and bursting strength of paper and the folding endurance. Microscopic tests for the examination of the fiber will also be carried on. The general chemical analytical work of the company which is of particular interest to the paper merchant, such as tests on coal, fuel oil, water, etc., will also be demonstrated.

Representative in charge: H. E. Bishop, assisted by H. M. Holmes.

Valley Iron Works Company.—Space 87.

The featured items in this exhibit will be the Voith High Pressure Stock Inlet, the P. A. P. A. Screen, Laboratory Beater and size testing apparatus.

Representatives in charge: E. A. Peterson, president, assisted by Harry Bennett, Eastern manager; W. H. Burns and R. A. Peterson.

Voorhees Rubber Manufacturing Company.—Space 88.

"Sensation" belt, "Sensation" hose and rub-steel valves will be shown in this exhibit. One of the features to be exhibited will be a piece of "Sensation" water hose that has been in continuous service for two years.

Representatives in charge: L. E. Housley, assisted by E. M. Frazier.

Walden Sons & Mott, Inc.—Space 43.

Waldron, John, Corporation.—Space 9-AA.

This company will exhibit a complete line of Franke couplings.

Representatives in charge: Mr. Smith and Mr. Serrell, assisted by Paul G. Hooper.

Western Paper Makers Chemical Company.—Spaces 19, 20 and 21.

This exhibit will be in conjunction with the Paper Makers Chemical Company. It will consist of a special demonstration of hand-made paper making by Dard Hunter. There will also be a complete display of the company's products.

Representatives in charge: Ralph N. Snell and W. J. Lawrence, assisted by James Foxgrover, C. H. Kent, E. J. Johnstone and Alex Duncan.

Westfield River Paper Company, Inc.—Space 80.

This concern will show embossed glassine, plain glassine, celloglas, silver coated glassine. The display will show all articles wrapped in glassine and will otherwise show the many uses to which it is put.

Representative in charge: Albert Kyritz, Jr.

Westinghouse Electric and Manufacturing Company.—Space 4.

Here will be shown a sectional driving unit of the Westinghouse sectional paper machine drive. This

Nash Hytor

The VACUUM PUMP FOR SUCTION ROLL *and* FLAT BOX SERVICE

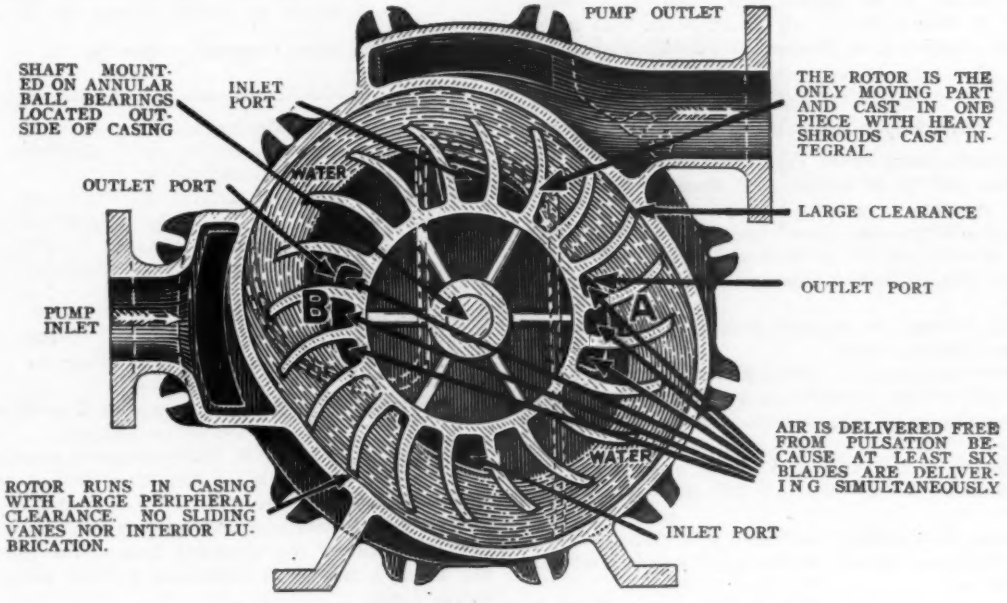

PUMP OUTLET
SHAFT MOUNTED ON ANNULAR BALL BEARINGS LOCATED OUTSIDE OF CASING
INLET PORT
THE ROTOR IS THE ONLY MOVING PART AND CAST IN ONE PIECE WITH HEAVY SHROUDS CAST INTEGRAL.
WATER
OUTLET PORT
LARGE CLEARANCE
OUTLET PORT
PUMP INLET
B
A
AIR IS DELIVERED FREE FROM PULSATION BECAUSE AT LEAST SIX BLADES ARE DELIVERING SIMULTANEOUSLY
WATER
ROTOR RUNS IN CASING WITH LARGE PERIPHERAL CLEARANCE. NO SLIDING VANES NOR INTERIOR LUBRICATION.
INLET PORT

Diagram illustrating unique principle of operation

Vacuum Produced Absolutely Without Pulsation. No Vibration. Saves Wires. Only one Moving Part. No Rods, Pistons, Crank Shafts, Loose Moving Parts and No Gears. No Expert Attendance.

Nash Engineering Company

Wilson Point Road, South Norwalk, Connecticut

Western Representative
T. H. SAVERY, JR.
1718 Republic Bldg.,
Chicago, Ill.

New England Representative
G. H. GLEASON
185 Devonshire St.,
Boston, Mass.

GUIDE TO THE PAPER INDUSTRIES EXPOSITION

will consist of a Type SK motor coupled to a parallel shaft, single reduction gear, both of which will be mounted on a common bedplate with a chain driven speed changer and rotary contactor; a master rotary contactor unit; a sectional control panel and a master control panel. This equipment will not be connected to any load but will be demonstrated in operation from start, fast, slow, stop, push buttons and speeds in terms of feet per minute of paper will be shown by an electric indicating device. In addition to this display there will be shown Type WK-10, WK-55, W-20 safety switches, a table of micarta products and some lamp reflectors suitable for paper mill illumination. Type X and Type Y alternating current meters will also be displayed.

Representatives in charge: W. H. Artz, manager, Paper Mill Section; E. Pugh, Industrial Sales Department; J. M. LaMontagne, New York office; W. J. Moore, New York office; A. D. McKerrow, Boston office; J. W. McGee, Philadelphia office; S. A. Staege, engineer of paper mill; W. W. Spratt, paper mill engineer.

Wheelwright, William Bond.—Space 57.

This will be an advertising display in which Mr. Wheelwright will show specimens of the advertising originated by him for the District of Columbia Paper Manufacturing Company, Falulah Paper Company, George W. Wheelwright Paper Company, H. Reeve Angel & Co., Albany Felt Company and the Saco-Lowell Shops.

Representative in charge: William Bond Wheelwright, assisted by Edgar B. Sherrill.

White & Wyckoff Manufacturing Company.—Space 53.

Williams, C. K., & Co.—Space 18.

The Williams exhibit will be an instructive display of dry colors and fillers for paper manufacturers.

Representative in charge: George W. Mitman.

York Haven Paper Company.—Space 62.

New York Paper Association Elect Officers

At the annual meeting of the Paper Association of New York City, held March 27, W. H. Holden, A. C. Damon and B. T. Blake were elected directors to serve for three years.

The following officers were elected for the ensuing year: President, K. S. Warner; 1st vice-president, Geo. W. T. Skinner; 2nd vice-president, Wm. H. Holden; treasurer, A. C. Damon; secretary, B. T. Blake.

William C. Ridgway the assistant secretary of the association submitted the following report:

I shall confine my report exclusively to the activities of the bureaus connected with the Association, and shall not attempt to review the happenings in the paper business in New York during the past year.

The membership of the Association remains at sixty-eight. The Credit Clearance Bureau has shown 1619 clearances during the past year.

The following are comparative statements of the activities of the Credit and Collection Bureaus for the years ending March 1st, 1923 and 1924:—

CREDIT BUREAU

	1923	1924
Number of names reported	1159	837
Number of members reporting same	49	52
Number of requests for information	792	710
Number of members making such requests	25	26

COLLECTION BUREAU

Number of claims received	1155	803
Amounting to	$167,333.43	$148,344.75
Number of claims collected in full by letter	617	342
Amounting to	65,521.32	40,975.18
Number of claims collected in full by suit or local attorney	174	132
Amounting to	37,116.15	29,846.22
	1923	1924
Number collected in part or still open	18	62
Amounting to	$ 4,204.36	$ 22,829.56
Amount collected on account of same	1,638.00	7,913.21
Number in process of collection	140	83
Amounting to	22,180.60	12,159.14
Number proved in bankruptcy or insolvency proceedings	91	76
Amounting to	31,051.18	33,069.71
Number uncollectable and closed	106	103
Amounting to	6,912.91	7,820.94
Number withdrawn	9	5
Amounting to	346.91	1,644.00
Number collected in full or in part	809	536
Amounting to	106,841.83	93,650.96

Big Pulpwood Shipments in Fox River

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., March 31, 1924.—Enormous quantities of pulpwood are being received in the Fox River Valley. Railroad men say the shipments are larger than for a number of years. As many as 200 carloads were received in a single day for mills in Appleton, Kimberly and Combined Locks. The pulpwood shipping season is now at its height, and probably will continue for several weeks.

An extra crew was given work by the Grandfather Falls Paper Company at Merrill to pile up the 10,000 cords of spruce which is being shipped from Minnesota to Merrill. The wood will continue to arrive until in the summer, and it is expected that almost enough will be shipped to the plant at this time to keep it supplied for the entire year. Rafting of wood across Lake Superior for the mills of Consolidated Water Power and Paper Company will be started in the near future.

Big Log Drive in Connecticut

[FROM OUR REGULAR CORRESPONDENT.]

BELLOWS FALLS, Vt., April 1, 1924.—The Bellows Falls Boom Company has completed rebuilding the piers and most of the booms in the Connecticut River preparatory for the opening drive of logs from the White River valley. This year's drive will be larger than usual aggregating over 15,000,000 feet which is now being rolled into the White River.

The ice in the river has not yet broken up but is slowly rotting away. The water is much lower than usual but is rising due to rains.

Established 1886

Resources

The buyer in need of expeditious service will find our facilities equal to any emergency.

Our pulp resources are being constantly amplified by large shipments in transit and it will pay you to seek General Head Quarters for Bleached and Unbleached Sulphite, Kraft and Ground Wood.

M. GOTTESMAN & COMPANY

—INCORPORATED—

18 East 41st Street
New York, N. Y.
U. S. A.

European Offices:
Stureplan 13,
Stockholm, Sweden

ALL FINE PAPER GRADES IN STRONG DEMAND IN CHICAGO

Outlook for Writing Grades Is Satisfactory but Coarse Paper Trade Slackens Up a Bit—Western Bag and Paper Co. Celebrates Opening of Its New Warehouse—R. P. Wood in Charge of Chicago Branch of Paper Utilities Co., Inc. —Joseph Rein Leaves Paper Industry to Join Lincoln Printing Co.—W. E. Dwight, President of Dwight Brothers Paper Co. Returns from Winter Stay in Florida.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., March 29, 1924.—Demand continues strong in this market for all grades and sizes of fine papers, although there were slight indications within the past week of an easing off. However, it did not go beyond this stage and paper men paid little heed to it. If any houses experienced a decline in business it was taken as an individual condition and not as indicative of the trade in general. Book papers are in as active demand as they have been for the last two months with printing houses as heavy contenders for stocks. Mills still have orders ahead for several weeks while prices hold steady with no tendency downward.

News Print in Steady Demand

News print is experiencing a steady market with firm prices. It is stated though that if better water conditions develop in the north a greater quantity of news print will be sent to market, when a large supply might have some weakening effect on quotations. Reports from most of the producing regions at present tell of a brisk call for sheet news. At the same time roll news deliveries are heavy with a good call for side runs. Just now it is the general report that a majority of the producers are sold ahead and have but little to offer to the transient trade.

Satisfactory Outlook for Writing Grades

In a review of conditions in the writing grades of paper, H. Van Petten, of W. E. Wroe & Co., Chicago, gave this size-up to a representative of THE PAPER TRADE JOURNAL.

"In this branch of the paper industry things have been coming along in fairly satisfactory manner. Volume this month has been keeping up equal to what it was in February in the main, although there were spotty periods from time to time. The month as a whole, I think, is going to be very satisfactory."

Lithographers and commercial printers comprise the heaviest buyers of writing grades at present. Prices still hold firm and seem to be stabilized. Increased costs of rags and the difficulty in securing the proper sorting of certain grades have caused manufacturers some uneasiness but the desire to avoid any tendency toward the possibility of inflation combined with the element of competition has prevented advances in prices so far.

Coarse Paper Trade Slackens

Trade in the coarse paper division of the industry has been somewhat slack for the last two weeks or so. Again, overproduction is blamed for the situation. Mills, for the most part, are running to capacity turning out heavy volumes of wrapping grades which must be marketed. Prices, therefore, are weaker. Industrial buyers have not evidenced any desire toward returning to the market for large quantities nor are they stocking up in advance. A hand-to-mouth policy regulates most purchasing.

Bags and small cartons, such as pails, are in fair demand with a reasonably firm market. An increase in prices on the former was looked for this week but nothing definite came to pass. If the larger producers adopted a new level, it was almost certain to induce smaller ones to do likewise in view of the fact that quotations have not been allowing a sufficient margin for a legitimate net profit. Twine goes along at a steady pace. It presents a bright spot just now in the trade of coarse paper merchants. Both hemp and jute stand well ahead as leaders.

Tissues have been holding very firm with an upward tendency, even though this is a between-season period for the millinery trade. The real busy season in tissues for that industry will open about July 1. A fair demand is reported also for toilet papers with a firmness in price.

Weaker Market on Paper Stock

Several items in the paper stock line took a downward course within the last week. The others remained at the same levels. No. 1 manilas went off $1 a ton, while solid books receded $2 per ton. Old newspapers, both grades, dropped from $1 to $2 a ton while mixed papers, No. 1 and No. 2, took the most radical cut, going down $2 to $16 per ton. A representative of Chicago paper stock firm spent several days last week visiting the board mills and he reports that they all claim business is very light and they do not feel justified in purchasing paper stock under those conditions.

Western Company Opens New Warehouse

A real celebration marked the opening of the new building erected by the Western Bag and Paper Company at 64th and Wentworth avenue, this city, on Saturday, March 22. At four o'clock in the afternoon all employes, including officers and salesmen, and their immediate families, met in the offices of the new building and proceeded through the entire structure on an inspection tour, going from basement to roof. From there the party proceeded to the Rose Room of the Cooper-Carlton Hotel, where the main event of the celebration was held in the form of a dinner, entertainment, dance and card party. Albert Inlander is president of the Western Bag and Paper Company, Henry E. Weinstein, vice-president and treasurer, and Clarence M. Fish, secretary.

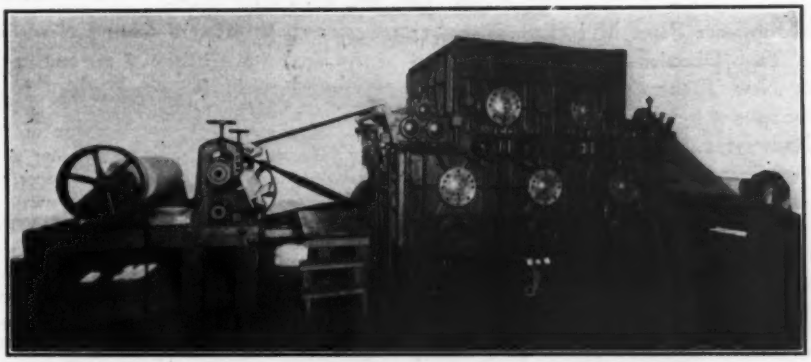
The new building is situated right on the corner of the street intersection. It is of brick and concrete construction, two floors in height, with a basement. It is 60 by 125 feet in size. A space 25 feet wide across the entire width of the building, 60 feet, in the front part of the first floor is used for the office. It is finished in oak woodwork with a magnesite floor, and is heated by a hot air system. Right in the corner of the building on this floor a display window has been built in where products of the firm may be exhibited not only to those who may pass by on the sidewalks, but also those in machines and street cars.

The balance of the first floor is used for bag storage. It has a capacity of ten cars at one time. In the basement wrapping paper is kept. Here there is a capacity of 15 cars. A gravity chute leads into the basement from the loading platform. Barrett lift trucks are used for conveying large quantities of paper around the establishment. An electric elevator runs from the basement to the second floor, where pie plates, butter dishes and toilet paper are stored, as well as a variety of specialties.

C. M. Fish, secretary of the company, gives all the credit for the layout of this structure to the architect, Homer G. Sailor, of Chicago. The arrangement is ideal for a business of this kind.

R. P. Wood Represents Paper Utilities

The Chicago branch of the Paper Utilities Company, Inc., of New York, is in charge of R. P. Wood, who has been representing the organization but a short time. The Chicago branch is known as the Tulip Cup Company and is located at 217 N. Desplaines street. It handles drinking cups, baking liners and ice cream service cups. Mr. Wood was formerly with the American Writing Paper Company in Philadelphia and later in Detroit. He is known to every paper merchant in this city and has called on over 2,000 local printing offices. Thus far he has been getting his sales campaign under way for a big 1924.



Embodying a new and improved method of drying paper by which paper is dried under a 28-inch Vacuum and at a temperature of 100 degrees F. with a greatly reduced number of dryers.

Less floor space.
No vapors in machine room.
Control of drying improved.
Quality of paper improved.
Quantity of steam reduced.
Lower drying temperature.
Drying independent of weather.
Broke reduced.

This machine will be demonstrated on the 10th and 11th of April (convention week), or at any other time by appointment at the plant of the Norwalk Iron Works, South Norwalk, Conn. South Norwalk is on the N. Y. N. H. & H. RR. one hour ride from N. Y. City.

INQUIRIES SOLICITED

OGDEN MINTON, Smith Building, Greenwich, Conn.

'Phone Greenwich 329.

MERGER OF MONTREAL MILLS SEEMS TO BE STEP NEARER

New Financing by St. Lawrence Paper Mills, Ltd., Taken as Initial Move in That Direction—Brompton Pulp and Paper Co. Gets New Timber Limits—Howard Smith Paper Mills Offer Issue of Seven Per Cent Bonds—Canadian National Railways Establish Department of Forest Protection—Brown Corporation Plans Enlargement of Its Canadian Property—Pulpwood Exports Increase.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., April 1, 1924.—New financing by the St. Lawrence Paper Mills, Limited, which has just been announced, is regarded in some circles here as an initial step leading to the long-talked of merger between news print mills in the Three Rivers district and it is stated that the discussion of the merger will be resumed upon the return of George Chahoon, Jr., from Florida in the near future. Mr. Chahoon is president of the Laurentide Company. The new issue of the St. Lawrence Paper Mills is for an amount of $2,500,000 to be raised through an offering of 6½ per cent 20-year sinking fund gold bonds due March 1, 1924. This issue is really the initial financing for this company, which was brought into being largely through the application of private capital, and the outstanding preferred and common stock is closely held. The issue is part of an authorization of $7,500,000. A rather interesting feature in connection with the bonds is an issue of common stock warrants which accompanies them, entitling the holder to purchase up to September 30, 1924, two shares of no par value common stock for each $1,000 par value bonds held. The Company's newsprint mill at Three Rivers contains two paper machines giving a daily capacity of 150 tons, or a yearly output of 45,000 tons. Future supply of pulpwood has been amply provided for by the acquisition under leasehold from the Province of Quebec of some 500,000 acres of timber limits and the consummation of a 20-year contract with Jno. Breakey, Limited, lumber manufacturers, for the supply of 50,000 cords of pulpwood annually. Through the foregoing arrangements the company is assured of, at least, a 60 years' supply of wood.

Brompton Secures New Wood Supply

At a special meeting of the Brompton Pulp and Paper Company, Limited, held in Montreal, an announcement was made regarding the new timber limits which the company has secured. Under the arrangements the company will have available for its use an area of approximately 45,000 acres of land comprising approximately half a million cords of pulpwood, 65,000,000 feet of pine lumber, as well as other woods, and an up-to-date and efficient mill and plant, together with contingent equipment, sidings, etc. The area has been purchased from the Howard estate at a price which is considered extremely favorable and will be paid for through an issue of $850,000 of 6 per cent 15-year bonds of the McCrea Wilson Lumber Company. Of this total the Howard estate takes a sum of $359,000 of the bonds, the balance of $500,000 being financed through private sources at a price of 90, which latter transaction supplies the necessary cash to conclude the deal. The Brompton Pulp and Paper Company figures in the deal to the extent that it will own the entire capital stock of the McCrea Wilson Lumber Company, thus giving it control over the new limits which will become theirs in full right upon maturity of the bond issue. Meantime, the Brompton Company has at its disposal a fresh source of supply of excellent wood for which it pays on a stumpage basis of $2.50 a cord. This means that the company will only pay each year for the amount of wood which it takes out while the price involved is considered extremely low. Moreover, the new limits approximately 24,000 acres of which are in Canada and 21,000 acres in the State of Maine, are closely adjacent to the Brompton Mills, this promising a low freight rate and excellent woods, jobbing and other facilities.

Howard Smith's New Financing

An issue of $1,471,200 of 7 per cent first refunding sinking fund gold bonds is being made by the Howard Smith Paper Mills. These are offered to the public at 98 and interest, yielding 7.2 per cent. The issue is for the purpose of retiring $200,700 of first mortgage bonds on the Cornwall plant at maturity on September 1 next, to complete payments on timber limits, and to reimburse the company for expenditures at Cornwall and other mills. There had been a previous issue of about $2,500,000 of these bonds some three years ago, and the present issue together with the previous one and a block of bonds amounting to $468,200 held in escrew to retire a like amount of 6 per cent underlying bonds of the Beauharnois and Crabtree plants, will bring the total amount issued to $4,500,000 out of an authorized issue of $7,000,000. After giving effect to this financing the net working capital of the company will be $1,258,460.

Railways and Forest Protection

The Canadian National Railways has established a department of forest protection with W. H. Kilby in charge. During the past week, the company has held a conference in Montreal with men prominent in every branch of forestry work in Canada and officers of the Canadian National Railways, and at this meeting co-operation, not only that of its staff, but of its fire-fighting equipment, its radio and telegraphic facilities, and by the appointment of a committee to meet with them, for the purpose of finding solutions to such problems as may arrive, was offered by the Canadian National Railways. Clyde Leavitt, chief fire inspector of the Board of Railway Commissioners, complimented the Canadian National Railways on the excellence of its appliances and the steps that had been taken to reduce fire hazards along the lines. He felt that forest protection was no longer considered a fad, but a matter of the gravest economic importance, and that the success of forest protection lay entirely in the united effort of all bodies organized in its behalf.

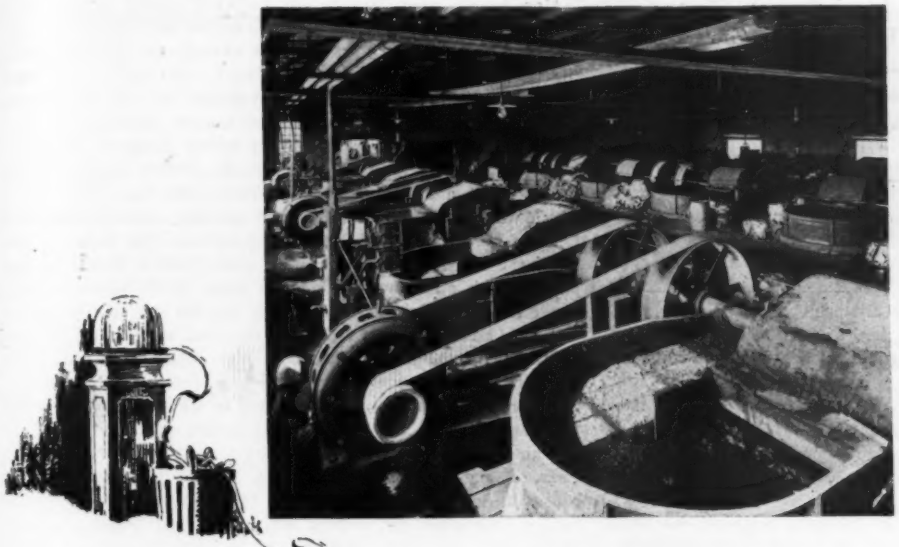
Increase in Pulpwood Exports

A rather surprising increase in exports of pulpwood was shown during February, when the total amounted to 131,785 cords compared with 99,830 cords in February of last year. This is the highest figure recorded since August, 1923. The value of this pulpwood was $1,219,525, as compared with $866,128 exported in February last year. The price showed an average of $9.26 per cord as compared with $8.67 per cord in February, 1923.

St. John River Log Firm to Wind Up

A despatch from Fredericton, N. B., says that because the St. John River Log Driving Company is going into liquidation the booms which have been annually hung on the St. John river above and below Fredericton for 75 years or more will not be placed this spring, and rafting operations will not be carried on at the customary rafting grounds, unless some new organization is formed. Sale of the assets of the company, which include equipment said to have cost $100,000, will also be one of the results of the decision to wind up the company's affairs. Not more than ten years ago as much as 150,000,000 feet of logs used to come down the St. John river, were caught in the booms above, and below Fredericton, and were rafted at the rafting grounds in connection with the booms and towed in rafts from there to the mills at Fredericton and at St. John, largely to the St. John mills. Changed conditions in lumbering operations have lately resulted in little lumber coming down the St. John river to the booms at Fredericton, although the amount was augmented somewhat last year as a result of the freshet, which carried away considerable quantities of logs from up river points, and brought them down.

Dilts-



Panic or Prosperity

DILTS BEATER ENGINES ARE ALWAYS THE BEST

There's nothing like hard times to test the metal of a company.

During the panic of 1907 and the slow period of 1920-21, most companies curtailed their activities and marked time. Dilts Machine Works, Inc., during these periods, introduced two outstanding beater developments. In 1907, an iron tub beating engine with a concrete bottom. In 1921, the first keyed bandless beater roll—and between 1907 and 1921 other improvements of equal importance have been made.

What does this mean to you?

Apart from the fact that these two developments made a better beater engine available for your work, it means this—in good times or bad the Dilts Machine Works, Inc. is constantly striving to better your beating conditions by building the best beating engine that can be built. We shall be glad to discuss your beating problems with you.

6530

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

PRIZES AWARDED ONTARIO MILLS FOR SAFETY EFFORTS

Annual Trophy in Class A Goes to Riordon Co. of Hawkesbury, and Honor in Class B to Miller Brothers Co. of Glen Miller—Continental Wood Products Co. to Erect Kraft Pulp Mill—Work Progressing on Ground Wood Pulp Mill at Fort William—Government Working on Forest Protection Policy—Niagara Plants Close for a Few Days—Spruce Falls Co. Opens Community House.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, April 1, 1924.—Safety work is making good progress among the pulp and paper mills of Ontario. In the contest for the annual trophy during the past year, the award in Class "A," which takes in mills employing two hundred hands or over, was given to Riordon Company, of Hawkesbury, and the honor in Class "B" went to Miller Brothers Company, of Glen Miller, Ont. Class "B" implies mills employing less than two hundred persons. The Riordon Company had a record of 60 non-fatal accidents, involving lost time of 481 days, which is equal to 1.1 days lost time per full time employed. Miller Brothers had only one non-fatal accident during the year, involving lost time of 12 days, which is equal to .27 days lost time per full time employed. The trophies will be presented to the winning mills as soon as suitable arrangements can be made.

The report of Secretary-Engineer Costigane reviewed the work for the past year in its various phases and commented upon the increasing interest generally in Safety work among the various plants and the men and management.

H. F. E. Kent, of the Kinleith Paper Company, Toronto, was elected president for the coming year and succeeds C. Nelson Gain of the Garden City Paper Company, St. Catharines. L. R. Wilson, of the Abitibi Power and Paper Company, Iroquois Falls, was appointed vice-president and A. P. Costigane, secretary-engineer.

The board of directors for the coming year is as follows: George Carruthers, Interlake Tissue Mills Company, Toronto; I. H. Weldon, Provincial Paper Mills, Toronto; C. H. L. Jones, Spanish River Pulp and Paper Mills, Sault Ste Marie; John Black, J. R. Booth Company, Ottawa; K. S. Maclachlan, Lincoln Mills, Merritton; W. A. Wallace, Howard Smith Paper Mills, Cornwall; C. Nelson Gain, Garden City Paper Mills, St. Catharines, H. F. E. Kent, Kinleith Paper Company, Toronto, and L. R. Wilson, Abitibi Company, Iroquois Falls.

Will Erect Kraft Pulp Mill

The Continental Wood Products Company, Elsas, Ont., has engaged engineers to prepare plans for the new power dam, in preparation for the kraft pulp mill of seventy-five tons capacity, which will be erected at Elsas. The new plant will be the most up-to-date in its line on the continent. The saw mill of the company will double its output this season owing to cutting heavy lumber and timbers for the kraft mill construction. The company last year built eleven cottages for employes and many more will be put up this summer to take care of the men engaged in the erection of the new mill. The organization had a large cut in the bush last winter. L. E. Bliss is the vice-president and general manager.

New Pulp Mill at Fort William

J. H. Black, president of the Great Lakes Paper Company, Fort William, returned to Toronto last week after a visit to Fort William where good progress has been made on the construction of the new ground wood pulp mill, which will have a capacity of 180 tons daily and be put in operation in May next. The company will proceed this season with the building of a news print plant of 100 tons initial capacity at a cost of about two million dollars. This will ultimately be increased to 400 tons daily. Power will be delivered to the pulp plant by the Hydro-Electric Commission from Cameron Falls in regard to the change in price for power from $18 to $21. Mr. Black says that it was made with the full consent of the company and that negotiations had been amicable between himself, the Ontario government and the Hydro-Commission.

Greater Protection From Forest Fires

Hon. James Lyons, Minister of Lands and Forests for Ontario, in a recent address in the Legislature, stressed the importance of the pulp and paper industry in Northern Ontario and said that it was the intention of the government to work out a policy that would provide continuous supplies of raw material, not only for existing industries but any others that the government might approve of, in perpetuity. A general survey of the timber resources of Ontario would be undertaken in the near future. Before another year he believed that a system of slash burning will have been devised, which would constitute a solution of the long standing problem in Ontario lumbering and pulpwood operations. He intimated that, when the system was worked out, slash burning would be compulsory with all companies. There were 89,000 square miles of forest left in Ontario which, he said, was not any too considerable when one considered that 2,120,000 acres had been burned over last year of which 30 per cent had been high class timber lands. The Province would utilize its own aircraft force for fighting fires during the coming season and expected to save on this service over the present system at least, a quarter million dollars annually. By this air service the government hoped to have patrolled 30 million acres of land never patrolled before. In the past there had been enormous losses in that vast area from fires, which started and burned themselves out without any person ever knowing anything about them. Mr. Lyons declared that he hoped to save that acreage from fire in the future.

Would Improve Forest Products Laboratory

George Carruthers, of Toronto, president of the Canadian Pulp and Paper Association, was in Ottawa during the past week, being a member of a delegation which interviewed the Minister of the Interior in reference to improving the Forest Products Laboratory in Montreal to the end that the research work of the Association might be put on a more effective basis.

Niagara Plants Will Close for Few Days

The federal government has notified a number of pulp and paper companies operating along the old Welland canal in the Niagara Falls district that cleaning and repair operations will be commenced on the waterway this week. This will mean that all concerns will close down for a few days during which they will make necessary repairs to plants and give the equipment of the mills a needed overhauling. Among the concerns, which will shut down temporarily, are the Lincoln Mills, Provincial Paper Mills, Ontario Paper Co., Interlake Tissue Mills, and others in that district.

Notes and Jottings of the Industry

Charles F. Mansell, of the sales staff of the Howard Smith Paper Mills, Toronto, has returned after spending a pleasant winter holiday in St. Petersburg, Florida.

Howard Casey, of the Chemical Paper Manufacturing Company, Holyoke, Mass., was a caller on the Toronto trade during the past week.

The Municipal Committee of the Ontario Legislature has passed a bill enabling reeves and deputy reeves of townships to call out residents to fight forest fires and to remunerate them for their services.

The Porcupine Pulp and Lumber Company, Hoyle, Ont., took out 13,000 cords of pulp wood during the season just closed, which is about three times the amount of last year. The wood, after it is rossed, is shipped to the Cliff Paper Company at Niagara Falls, N. Y. M. E. Crouch is the manager of the Porcupine Company, which will, at the end of the rossing period, erect a saw mill of 15,000 feet cutting capacity. Labor supply is plentiful in the district around Hoyle.

To Users of Fine Papers

During the week of the Convention, we will exhibit at our offices, special technical, papeteries, art, printing and commercial hand made and machine made papers of both domestic and foreign manufacture.

Papers of distinction, which combine individuality and attractiveness and which at the same time will serve for practical work, at prices which make them possible for commercial uses.

These papers will offer a splendid opportunity for Paper Jobbers and Converters to add to their lines exclusive papers protected by territorial arrangements, which will produce increased profits.

We hope you will visit us.

FRED C. STRYPE

NEW YORK CITY

Imported and Domestic Special Papers

Waldorf Astoria Hotel
Pennsylvania 5400

320 Broadway,
Worth 7481

FEDERAL RESERVE BANK'S VIEW OF PHILADELPHIA TRADE

Finds Trade as a Whole More Active Than It Was Last Month—William J. McGarity, Jr., Now Associated with Penn Paper and Stock Co.—Cotton Waste Dealers to Hold Annual Banquet at Bellevue-Stratford Hotel—Excelsior Supply Co. to Feature Exclusively the Manufacture of Tickets for Marking Clothing—News Notes and Personals of Paper Trade.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., April 1, 1924.—An extensive survey of the conditions in the paper trade both in distribution and consumption, was made in the report of the Federal Reserve Bank for the Third or Philadelphia district today. The report says:—

March, 1923. Book and fine papers are in good request, and operations at the mills have advanced to 85 per cent of capacity. The call for most grades of wrapping papers is also strong, and in this district the majority of mills are working at or near capacity. However, the glassine market is more or less demoralized, owing to severe price cutting among the manufacturers, and some plants are running at only 50 per cent. Toilet tissues and crêpe towels are in active request, and production at these plants is close to capacity. Paperboards, particularly box boards, are selling more freely than they did in the two preceding months, and most mills are operating at 90 per cent. Manufacturers of cardboards and tag stocks report only a fair demand, and few are working at more than 70 per cent. Makers of tags state that competition is very severe and that they have sufficient orders to keep only two-thirds of their equipment in operation. Wall papers are selling well, and the mills are working at capacity. Envelopes and tablets are in good demand, and most converters are operating at 85 per cent of capacity. Buyers are still adhering to their hand-to-mouth policy, as is seen in the fact that none of the mills that report to us have more than 30 days business on hand. Jobbers state that sales are larger than they were last month. Paper production, except in the book grades, has not yet this year reached the high mark of last June.

Paper Prices Firm

Paper prices are now quite firm and are the same as they were last month. The slight weakness which was apparent in kraft paper prices early in February has now vanished, and the granting of concessions has virtually ceased. Mechanical and chemical pulps still display some softness, but owing to the increasing demand, especially for chemical pulps, prices are tending to stiffen.

Finished stocks at the mills vary from light to moderate and show little change since last month. Mill stocks of raw materials are moderate. The supply of all classes of labor is adequate and wages are unchanged. Collections vary from fair to good and are much the same as they were last month.

In general, the wholesale paper trade is more active than it was last month, and the demand is good. Fine papers and book papers are selling well, and the call for tissues is better than in any previous month of the year. Wrapping, kraft, and building papers are moving in greater volume than they did last month, and prices have become firm. The demand for newsprint is well sustained, but box cover papers are in only fair request. Some changes in price have occurred, such as an advance in building papers and a slight decline in box cover papers, but on the whole prices have held firm. Stocks held by wholesalers are slightly larger than they were last month but are by no means heavy. Collections are fair and a trifle slower than they were in February.

Our reports from distributors show that wholesale paper sales in February were 2.0 per cent larger than in January and 3.5 per cent greater than in February, 1923. The ratio of accounts outstanding to sales in February was 149.1, as compared with 147.0 in January and 146.7 in February, 1923.

W. J. McGarity, Jr., With Penn Co.

William J. McGarity, Jr., son of William J. McGarity, head of the Penn paper and Stock Company, has become associated with the firm for the purpose of learning the details of the business from the ground up. He has been assigned to the position of assistant to Manager John Costello, of the Wiping Rag Department and will pass from that duty to others as soon as he has become proficient in this section of the paper stock industry.

Cotton Waste Dealers to Dine

Philadelphia paper stock dealers will be represented in large numbers in the membership of the local Cotton Waste Exchange annual banquet to be held at the Bellevue-Stratford Hotel on April 3. The banquet will be held on the Roof Garden of the Hotel. Joseph F. Hughes of the Kelly Hughes Company is chairman of the Entertainment Committee. He has arranged for the speakers' program, a former member of the cotton waste industry, Senator Joseph F. Walworth, President of the New Jersey Senate, who now is retired from the business; Colonel Rice and Senator George Wharton Pepper of the United States Senate representing Pennsylvania. Over two hundred members and friends will be present including members of the trade from New York, Boston, Baltimore, Washington, Richmond and other Southern points.

Excelsior Co.'s Specialized Line

The Excelsior Supply Company is now featuring exclusively the manufacture of tickets for marking clothing and used in the garment and clothing industries. Sidney Saffian, head of the firm, has discontinued the commercial printing plant operated in connection with the ticket manufacturing department and is confining the printing end of the business exclusively to the printing of the garment markers. The manufactory is equipped to produce these markers in large quantities and is disposing of them to the trade requirements as well as the garment industry direct.

Trade News Notes

Philadelphia headquarters of the Milwaukee Lace Paper Sales Company has been removed to Room 910, Jefferson Building, 1015 Chestnut street, where the local sales offices of Manager C. E. Lynch are located.

Following a five weeks' illness from pneumonia, W. H. Tunstall, Philadelphia manager for the Embree Company, Inc., whose mills are located in Buena Vista, Va., is again able to be about and is planning a trip through the Middle West and Western New York State points in the early part of April. The local branch of the Embree Company is now located at 915 Ruscomb street and covers the trade in the Philadelphia territory, Western New York and the Middle West, catering to the boxmaking, stationery and printing trades for its line of lace doilies, shelf papers, fancy lace novelties and bristols. There is being introduced to the trade a new crêpe shelf paper in plain white and six colors, just added to the lines this year.

Sylvester S. Garrett, dealer in coarse papers and specialties, 259 S. 3rd street, is bringing out a new high grade strictly No. 1 Kraft paper under the Independence Brand to be marketed at 6 cents per lb. It is made exclusively for the firm by a domestic mill.

Changes have been made in the telephone assignment of the Keystone Paper Mills, of Upper Darby, Pa., near Philadelphia. The mills are now connected to the newly created Allegheny exchange of the Bell Telephone Company of Pennsylvania, the number being Allegheny 2766.

There has been added to the sales organization of the Universal Paper and Twine Company, Morton Harris, a recent graduate of the Wharton School of Finance of the University of Pennsylvania

(*Continued on page* 94)

MODERN business development demands paper. Without paper—*abundant, varied, low-cost paper*—the great economic machine would soon have to shut down. To get paper in such volume and variety, we go back to the Forest. UNION BAG & PAPER CORPORATION does this literally—as you can see by attending

PAPER INDUSTRIES EXPOSITION
GRAND CENTRAL PALACE, NEW YORK
WEEK of APRIL 7th ▪ Booths Nos. 54 and 55

The Union exhibit—larger and more graphic than last year—will follow the path from Forest to Consumer. Logs, Lumber, Pulp, Paper and Paper Bags mark the various stages of converting spruce trees into wrappings and containers.

Of course the last stage—the Paper Bag—is the most interesting. Even those who are in a general way familiar with the paper industry will find themselves in a "new" field here. Union "Odd and Special" Bags, for instance, have found a thousand and one places to serve effectively, neatly, economically. Many of them are so refined (as to materials, formation and decoration) that they can hardly be recognized as "paper bags."

By all means see this annual Exposition. It is giving the public a new idea of the importance and development of your industry. And be sure that a welcome is waiting for you at the Union stand.

UNION BAG & PAPER CORPORATION
AND ASSOCIATED COMPANIES AND BRANCHES
Manufacturers of Lumber, Pulp, Newsprint, Wrapping Paper, Paper Bags and Paper Sacks
GENERAL OFFICES ▪ WOOLWORTH BUILDING ▪ NEW YORK CITY

TRADE MARK UNION

Editorial

Vol. LXXVIII New York, April 3, 1924 No. 14

HENRY J. BERGER, Editor

COMING EVENTS

American Paper and Pulp Association, Convention and Meeting of Affiliated Associations, Waldorf-Astoria, April 7-11.
National Paper Trade Association, Convention, Waldorf-Astoria, April 8-10.
Technical Association of the Pulp and Paper Industry, Convention, Waldorf-Astoria, April 7-11.
Salesmen's Association of the Paper Industry, Convention, Waldorf-Astoria, April 7-10.
Waste Merchants Association of New York, Banquet, Hotel Commodore, April 9.
Paper Industries Exposition, Grand Central Palace, April 7-12.

DO IT NOW

The greatest single advance in the effort to set up an adequate National forestry policy in the United States was scored on March 31 when the Committee on Agriculture of the House of Representatives ordered a favorable report upon the Clarke bill. The hearings upon the bill itself held the previous week were described in the PAPER TRADE JOURNAL of March 27. As then stated, there is nothing new or revolutionary in the pending legislation. The chairman of the National Forestry Program Committee said that it is the logical outcome and culmination of fifty years of consecutive effort to conserve our forest resources. More especially, it is the direct sequence of the efforts led by the paper industry during the past four years, which resulted in the Snell bill upon which extensive hearings were held by the House Committee in 1921 and 1922 and which were of great educational value.

The Clarke bill, now recommended for passage, provides for a greatly enlarged program of Federal cooperation with the States and timberland owners in fire prevention; for the continued purchase of forest lands upon the watersheds of navigable streams; for forest planting in cooperation with the States and especially in co-operation with the owners of farm woodlots; for the protection of the forests upon large areas of public lands heretofore neglected, and for studies and reports upon the important questions of forest taxation and forest insurance. These additions to present provisions for forest research and investigation, administration of the national forests and the maintenance of the forest service will give us for the first time the main features of a rounded-out policy to make all forest land, regardless of ownership, continuously productive of timber crops.

The progress which it is a pleasure here to record has been made possible through the co-operation of foresters, timberland owners, lumber manufacturers, the wood using industries and many organizations which are devoted to furtherance of the public interest. At the hearing last week the representative of the American Newspaper Publishers Association, the members of which use 80 per cent of the news print paper used in the United States, said:

"News print paper, which we use, is just as much a forest product as a board or a piece of furniture and we are depending upon the forests for our raw material.

"We believe that we speak conservatively when we say that without a plentiful supply of paper, it would be impossible to carry on the processes of modern civilization. There never was enough paper until the use of wood pulp began about fifty years ago. If our forests are not put upon a producing basis, a shortage of paper will come again."

In similar vein, the spokesman for the American Paper and Pulp Association said:

"While the paper industry in the United States is using only approximately 4 per cent of the annual cut of wood in the United States, yet as a wood using industry, it is facing the immediate and serious problem of its very existence through the present lack of adequate federal and state forest policies.

"The paper industry of the United States approves the Clarke bill and urges very early action upon the bill by Congress."

The bill will become a law this session of Congress if the universal sentiment in favor of it is heard in Washington. Every pulp and paper manufacturer in the United States should immediately communicate his views on the subject to the Congressman from his district.

BIG WEEK AHEAD FOR PAPER INDUSTRY

Next week, with the second Paper Industries Exposition at the Grand Central Palace in New York, the annual meeting of the National Paper Trade Association and the convention of the American Paper and Pulp Association, and meetings of the various affiliated organizations, will be an eventful and important week for the entire industry.

In this number the PAPER TRADE JOURNAL presents a brief outline of the exhibits which will be found at the show together with the floor plan. A perusal of this and a study of the program to be carried out during the week is a promising guarantee that the week will be one of lasting benefit to the trade.

The exhibits are thoroughly representative of the industry in all its branches. The visitor who goes to the show looking for information regarding any one thing is practically assured that he will be successful in finding it if the thing he is interested in touches, even in a vague way, the paper industry.

The program shows that the week has been crowded with meetings and other events. Practically every minute has been utilized. The various associations have arranged for programs of unusual merit. The papers which will be presented will, without exception, be on timely subjects and will be presented by qualified authorities on the various topics. Many of these papers concern matters on which there are varied opinions in the trade and beneficial discussions will be a natural result.

Some important business will be brought up at the annual meeting of the National Paper Trade Association and matters of vital interest to the trade will be discussed at some of the other meetings. The various banquets will, of course, stand out as a feature of the week. Live committees on entertainment have secured able and well known speakers and have also arranged for other entertainment features which will contribute to the success of this portion of the program. An unusual number of reservations have been made and an attendance larger than that of last year is anticipated for each of the banquets.

When the Paper Show opens next Monday it will be found that the entire field of paper manufacture has been thoroughly covered, from the raw material situation to the use of paper in manufactured

products. Control apparatus for the development of increased efficiency in the mills will be particularly well shown. Specialty devices for use in unusual phases of paper manufacture will also be an outstanding feature.

In the field of machinery, every phase of paper manufacture will be shown with elaborate showings of every method of handling the raw material. Many of the exhibits will be of machinery in operation. Grinders, beaters, rolls, driers and all such forms of heavy machinery will be seen.

In the displays of paper there will be some of the most notable exhibits. There will be a most artistic display of fine papers for business and social purposes. There will also be a large display of the products of the paper converters—bags, boxes and bottles. There will also be machinery for use in the conversion of paper. This will include cutters, slitters and coating machines.

The events of Paper Week can hardly help proving beneficial in every way to the industry and not the least of the benefit will accrue from the new public interest which will naturally become focused next week on the sixth among the great manufacturing industries of the United States.

Fraud Laid to Paper Firm

Edwin R. Mosher and Maurice Deverich, members of the paper jobbing firm of E. R. Mosher & Co., formerly at 52 Vanderbilt avenue, were held in $1,000 bail each for trial in Special Sessions March 21, after a hearing before Magistrate George W. Simpson in the Commercial Fraud Court on a conspiracy charge.

Assistant District Attorney Harold H. Spellman announced that the case was considered a test of its kind, and that "the result of the trial in Special Sessions would be awaited with much interest both on the part of the prosecuting authorities and business men in this state."

It was alleged that E. R. Mosher & Co. over a period of three years bought paper from other firms and then sold it to another paper company, by which they had been employed years before, at prices lower than they agreed to pay for it. Assistant District Atttorney Spellman brought out that the partners declared dividends and awarded each other commissions when there was a deficit, and they put off creditors by refusing to show their books.

In his decision Magistrate Simpson said:

"The elements of the crime and conspiracy are clearly indicated in the testimony. There is a reasonable and probable cause for me to believe that the crime charged has been committed and there is sufficient cause for me to believe the defendants guilty thereof."

Mosher and Deverich did not offer any defense.

New Mill Firms in the Northwest

SEATTLE, Wash., March 31, 1924.—Indicating that the Pacific Northwest may become an important factor in the wood pulp and news print industry in the near future, the Pacific Pulp and Paper Company has opened a temporary office in the Central Building here. The concern incorporated March 5 at Olympia, Washington, for $1,250,000. Carl L. Shuff, an attorney and former secretary to Governor Hart, and M. A. Wiese and A. J. Sherlock are the incorporators. All give their address as Seattle, Wash.

Another corporation, the Puget Sound Pulp and Paper Company, recently sought a contract for electrical power from the city council at a low rate. The company asked for a contract for 12,000 minimum and 26,000 maximum kilowatts of current and said that they proposed to erect a $6,000,000 plant on Lake Union.

Hearings on McNary-Clarke Forestry Bill

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 2, 1924.—Hearings were held before the Senate Committee on Agriculture and Forestry on March 28 and 29, in connection with the McNary-Clarke forestry bill.

Those appearing before the committee included Col. Wm. B. Greeley, chief forester of the United States; Gov. Gifford Pinchot, of Pennsylvania; L. W. Wallace, Executive Secretary of the American Engineering Council, and David T. Mason, timber engineering expert of Portland, Ore. No opposition to the bill was in evidence at the hearing.

Col. Greeley told the committee that the Senate Select Committee Reforestation which resulted in the McNary-Clarke bill was the most exhaustive investigation that had ever been made of the subject. He told the Agricultural Committee that the Select Committee had visited all the principal forest regions of the United States, and that it had held 25 hearings in as many different places.

He said that the bill deals with approximately one-fourth of the land area of the United States, and has two main purposes: First, the extension of public ownership, both Federal and State, of forest lands and lands suitable for forest growth and the broadening of forms of administration, and second, to encourage reforestation of land in private ownership. Col. Greeley also took the bill up section by section and discussed it from administrative standpoint.

Governor Pinchot explained to the committee that anything he said should not be construed as antagonistic to the bill. He stated that he favored it in a broad way, but insisted that it did not go far enough.

Unions Ask Renewal of Present Wage Scales

The paper manufacturers having union agreements have received the following communication, dated March 27, 1924:

"The paper organizations have just completed their annual wage scale conferences in Buffalo, New York. It was decided at these conferences to ask the paper manufacturers, parties to the existing agreements, to renew these agreements for another year at the present wage rates, provided certain readjustments and reclassifications were made on positions where there is too great divergence from the general scale of wages.

"These readjustments can be taken up with you by the representatives of the various organizations involved. We would suggest that a conference be held to discuss these matters as in previous years. We would appreciate your giving us a tentative date or dates as early as possible for such a conference.

(Signed)

International Brotherhood of Paper Makers—F. P. Barry. International Brotherhood of Pulp, Sulphite and Paper Mill Workers—John P. Burke. International Brotherhood of Machinists—J. J. McEntee. International Brotherhood of Carpenters and Joiners—John Flynn. International Brotherhood of Electrical Workers—J. T. Dowling. International Association of Stationary Firemen and Oilers of America—Timothy Healey."

Forestry Bill Favorably Reported

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 2, 1924.—The Agricultural Committee of the House on Monday ordered the Clark forestry bill favorably reported to the House with a few slight amendments.

This is the bill which was endorsed at the hearings last week by the American Paper and Pulp Association and various conservation associations. The bill now goes on the calendar of the House and it is expected that it will be acted upon soon. Very little opposition has developed toward the bill so far.

SYMBOL of QUALITY
KALBFLEISCH CHEMICALS
FOR NEARLY A CENTURY

Exclusive Manufacturers

or
Ryan-Seaman Process

DRY SATIN WHITE

The Latest Development in The Coated Paper Industry

Casein
Crystal Boro Phosphate
(A solvent for casein)

ALUM

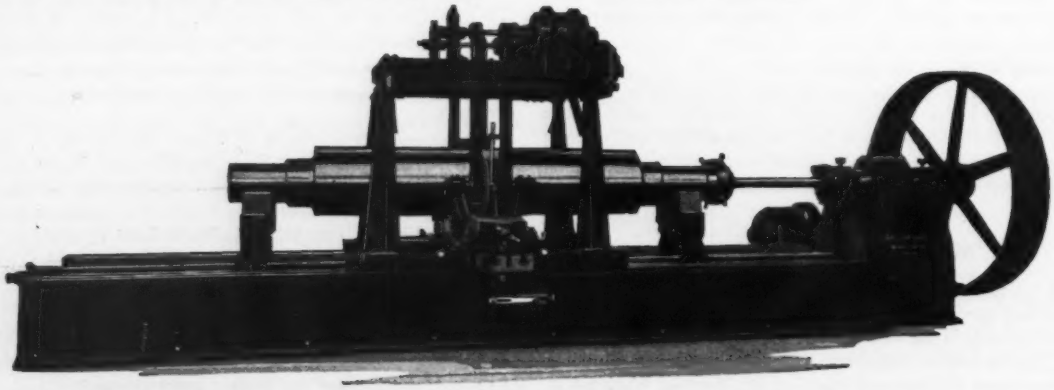
Both Commercial and Iron Free
FOR PAPER MAKERS

Pulp Satin White
English China Clay

THE KALBFLEISCH CORPORATION

200 FIFTH AVENUE, NEW YORK, N. Y.

LOBDELL **ROLL GRINDERS** are the only machines of the kind fitted with automatic crowning device which develops a perfect crown without the use of a guide or former and repeated trying for the correct setting.



LOBDELL Calenders are equipped with Patent Electric Motor, Hydraulic or Ratchet Lift all operated from the floor.

LOBDELL Micrometer Calipers are handy and accurate.

LOBDELL CAR WHEEL CO. Est. 1836 **Wilmington, Del. U. S. A.**

Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

MANUFACTURING TURPENTINE AS A BY-PRODUCT IN THE SULPHATE PULP MAKING PROCESS

O. W. A. Rodowski, Kaukauna, Wis.

This article I donate to the paper industry with the hope that it will be of some value, especially the sulphate pulp manufacturing branch.

I am not a graduate of any university, nor a member of any technical society, but have had practical experience in several sulphate pulp mills and laboratories.

Many manufacturing enterprises have had considerable waste, and turned this into a profitable proposition by means of by-products. In some cases these have turned out to be the principal manufactured product. The pulp industry has considerable waste, to make by-product manufacturing profitable, especially the sulphate pulp industry, the process of, of which I think, I am pretty well acquainted.

Rosin and turpentine would probably be the most important factors, especially if pines are used for the manufacture of pulp. In this wood the resinous substances are in excess for the recovery of soda and causes a lot of foaming, which makes the soda recovery very disagreeable, and at the same time the high percentage of resinous substances lengthen the washing operations in the diffusers. In my opinion, when some of the substances can be extracted economically during the cooking operations, it will not only make a better soda recovery possible, but also would shorten the washing operations and so in turn will increase the diffuser capacity and possibly prevent the disagreeable odors of the mercaptides formed during the cooking process.

[1]Falk found that the condensed materials obtained per ton of pine cellulose produced, contain the following substances:

Table I

	Kg. in oily portion	Kg. in aqueous portion
Mercaptan	0.062	0.06
Dimethyl sulphide	0.927	0.17
Dimethyl disulphide	0.103	0.05
Turpentine	8.474	0.92
Distillation residues	0.721	....
Methyl alcohol	.....	5.00
Ammonia	.....	0.18

From this investigation can be seen that about 2.93 gal. of turpentine were obtained per ton of pine cellulose produced.

[2]Freshly cut or green woods have a higher resinous percentage than the seasoned woods, as shown in Table II.

Table II

Kind of wood	Seasoned wood: Per cent fat	Seasoned wood: Per cent resin	"Green" wood: Per cent fat and resin
Pine	1.43	1.11	4.90
Spruce	0.50	0.48	2.54

Tables III and IV show some investigated results on the amounts of the resinous substances in different woods.

Table III

Resinous contents of Canadian pulp woods
Percentage based on oven dried woods

Kind of wood	Soluble in: Ether	Soluble in: Alcohol	Total resin
Jack pine	0.9 – 1.5	0.5 – 0.8	1.4 – 2.3
Balsam, fir	0.6 – 0.8	0.8 – 1.2	1.4 – 2.0
White spruce	0.3 – 0.6	0.4 – 0.5	0.7 – 1.1
Black spruce	0.3 – 0.4	0.3 – 0.4	0.6 – 0.8

[3]Table IV

Kind of wood	Per cent fat, wax and resin
Scotch fir (*Pinus silvestris*)	1.63
Fir (*Pinus abies*)	0.97
Poplar	1.37

To my knowledge the American pulp woods have a higher resinous percentage than the European. This higher percentage ought to be to some advantage to the American manufacturer.

[4]Crude turpentine obtained from the digesters contains about 50 per cent of oil of turpentine. A careful distillation through a column will result in a colorless and scentless product which compares favorably with the turpentine otherwise obtained. Thirty per cent of this crude turpentine is methyl sulphide, which, according to Bergstrom, makes 30 per cent of the total oil. The methyl sulphide can be used as a solvent for nitro cellulose in place of ether.

First to Recover Turpentine as By-Product

In 1875 Dr. M. Faudel, in Legan, near Danzig, was, to my knowledge, the first one to recover turpentine as a by-product in the manufacture of pulp. He carried his process to a success. At its height the mill burned down, due to carelessness of a workman. The turpentine in the tank ran over, and to destroy the evidence he threw hot coal over it, which set the whole mill on fire.

In an old German process, about 1877, turpentine and rosin were manufactured as by-products in a "soda mill" by heating the pine chips with NaOH in steam jacketed digesters. About 1¼ kg. of dry NaOH to 1 cu. m. of chips was used. The procedure was as follows:

When the digester was filled, it was closed, steam turned into the jacket carefully and a very little into the digester, so as to warm

[1] Chemistry of Pulp and Paper Making. Sutermeister, p. 146.
[2] Manufacturing of Pulp and Paper. Vol. III, Sect. 1, pp. 52-53.
[3] Paper Mill Chemist. H. P. Stevens, M. A., p. 164.
[4] Manufacture of Pulp and Paper. Vol. III, Sect. 6, pp. 118-119.

the chips and NaOH and to make the air less dense in the digester. A vacuum pump was started at once to produce a vacuum in the digester to prevent the chips from oxidizing and from discoloring the turpentine produced. The vacuum pump was shut off as soon as the digester was under vacuum. Now more steam was turned on to raise the pressure in the digester and jacket to about 5.5-7.0 kg. sq. cm. (about 77-100 lb. sq. in.). At this point the turpentine vaporized and went through an opening in the top of the digester to be condensed; of course, it carried certain amounts of impurities with it, from which it had to be separated later.

The rosin went into the molten stage and collected in the bottom of the digester, from there it could be drawn off through an opening, after about two hours, with a perforated plate inside of the digester, with the aid of the digester pressure.

About two-thirds of the turpentine and rosin remained in the wood (about 8.3 litre per cu. m. of chips), all of which could be recovered, but would have lengthened the process, and also would deprive the black liquor of the fuel necessary for soda recovery.

After about three hours a NaOH solution of about 15° Be' was added to the chips at a pressure higher than the digester pressure, and sufficient to cover the chips. The valve was now closed and sufficient steam turned into the digester and steam jacket to raise the pressure to about 8 kg. sq. cm. (about 113 lb. sq. in.), and the cooking continued for about five hours, at which time the samples drawn from the digester charge showed that the chips were converted into pulp. Now the digester was emptied and the usual methods applied for washing the stock and running it to the beaters.

The whole operation, from filling the digesters to emptying them, took about 10 hours. Under modern methods this is too slow and would hamper the pulp production considerably. This can of course be avoided by installing more digesters, but would make the production of turpentine and rosin unprofitable.

Knoesel's Recovery of Turpentine

[5]Theodor Knoesel in Neustadt, West Prussia, manufactured turpentine as a by-product in the manufacture of sulphate pulp and claimed his process a success, as it was almost a 100 per cent profitable proposition and as good as French turpentine at that time. He produced his turpentine principally while he raised the pressure in the digesters, and all the chemicals added for pulp production. He purified his turpentine by agitation, exposure to sunlight, treatment with sulphuric acid and bleaching powder, but obtained better results with bleaching powder than with sulphuric acid.

In some places lead oxide is used to separate the sulphur from the turpentine. Redistillation processes are also employed. In connection with the latter, experiments have been made with passing the vapors through columns filled with glass, but with negligible results.

In Europe turpentine as a by-product is recovered very extensively, but the process is more or less of a secret one. It can be seen from the preceding that the idea of turpentine recovery is not new, but difficult to perform, and probably will be found a profitable one if carried out right.

The greatest amount of turpentine is found in pine woods. In the manufacture of pine pulp great quantities of turpentine escape from the digesters during and after the cooking operations, with the condensate from the vacuum evaporators and through the stack from the soda recovery plant. The easiest and most profitable source is from the digesters. Here, the sulphur from the sodium compounds has not at a certain stage combined with the organic and more or less volatile compounds of the rosinous substances from the wood, such as rosin, turpentine, pine oil and alcohol. The greatest difficulty is to collect the gases before the sulphur in the form of Na_2S, Na_2SO_4, Na_2SO_3 and $Na_2S_2O_3$ has combined with the organic substances of the wood. If this point is not watched very carefully, it will be found almost impossible to separate the sulphur from the organic substances (like turpentine) again, and if separated, it will have to be done with such expense that the manufacture of turpentine will not be a gain, but a loss.

When the sulphur combines with the volatile substances of the wood, especially the pines, it forms mercaptides, and these are volatile at very low temperatures and almost insoluble in water and are the principal cause of the disagreeable odors found in the gases of the sulphate pulp mills.

[5] Wochenblatt für Papierfabrikation. Vol. 17, pp. 1293, 1907.

Conclusions

To make the manufacture of turpentine, as a by-product, a profitable one, it has to be done with the greatest care, the least expense in machinery, power, space and labor.

Extensive laboratory research will have to be done to find the best results in turpentine recovery without hampering the pulp production to any extent.

The least power will be consumed by a gravity system.

The by-product plant should be so arranged that the present help in a pulp mill, especially the digester crew, will be able to handle this extra work without additional help.

It can readily be seen from the preceding that the investigations made, on the possibility of turpentine recovery, by the different authorities, differ greatly in regard to quantities produced, but, in my opinion, there ought to be an economical recovery of at least two gallons of turpentine per ton of pine pulp production.

The following table gives the present wholesale prices of turpentine when purchased in barrel lots:

TABLE V

These prices are taken from a Druggists' Journal

	Per gal.	Per 100 gal.
Chicago	$1.16	$116.00
New York	1.35	135.00
San Francisco	1.42	142.00

The present prices of rosin would probably also make it an attractive proposition to recover it as a by-product in sulphate pine pulp production, especially since the black liquor can stand a reduction in its rosinous contents, which would probably make better soda recovery and diffuser operation possible.

[NOTE.—An American mill now recovering turpentine from sulphate pulp reports "the crude turpentine we obtain from jack pine contains something over 95 per cent of water-white refined turpentine of the following analysis:

Specific gravity	.865
Distillation, 154°–162° C	98 per cent
Flash point	97° F.
Unpolymerizable matter	½ of one per cent

This analysis compares very favorably with the best gum turpentine, and we have no difficulty in marketing our output. The current price for steam distilled turpentine in Chicago at the present time is around 80 cents per gallon, but, as you know, this market is subject to rather sudden and wide fluctuations. We find no difficulty in recovering this crude turpentine from our digesters, and there is no difficulty in clarifying the amber-colored crude to water-white color. The business of deodorizing this turpentine to meet the requirements of the very exacting market is not at all easy, and we believe to the difficulties encountered in this respect is due the fact that many of the sulphate pulp mills have abandoned the effort to produce a marketable product. As to the yield, we get about 2½ gallons of turpentine per ton air dry pulp."—EDITOR.]

Harpers Ferry Paper Co. to Expand

HARPER'S FERRY, W. Va., March 31, 1924.—Stockholders of the Harper's Ferry Paper Company, makers of pulp, are to meet in the company's main office at Wilmington, Del., April 18, for the purpose of acting upon a proposition to create a bonded indebtedness of $250,000 to pay existing indebtedness of the corporation.

It also is proposed to act at the same time on a plan to extend the business, develop the properties already owned and acquire more.

THE ASA PROCESS

By E. Westarp, Th. Goldschmidt Corporation, New York

It is a well known fact that hitherto when glue has been used as paper sizing, its use has been restricted almost entirely to surface sizing in the field of ledger and writing papers. This restriction of so-called animal sizing has been due almost entirely to high costs. Moreover, surface sizing is also very expensive on account of the waste connected with this kind of sizing.

Attempts to Add Glue to Beater

Attempts had been made to add the glue to the beater but these processes did not meet with much success. In consequence of the great dilution only a small part of the glue was retained in the paper, most of it being lost in the effluent. Even, the attempts to add the glue in the form of a cool gel or by forming it with formaldehyde did not result in much improvement. When such gels are ground and then dissolved, the result is the same as if the ordinary glue solution were added.

When using the word "gel" we mean the jelly-like body formed when a 3 per cent solution of glue or gelatine cools. Gelatine desserts of the dinner table are a good illustration of such gels.

What the Process Consists of

The new Asa process consists in the use of a chemical agent which, on addition to the glue, transforms it into a gel which can be ground and added to the furnish in the beater. The advantage of such a chemical gel compared with a cool gel is that it is not dissolved by water or by the temperature in the beater. It remains, when running over the wire, in very fine dispersion on the fibers creating later on a very thorough connection between the fibers and—what is most essential—with the filler. The beater content so treated gives, after passing over the paper machine and the driers good retention of the glue and a most satisfactory sizing effect on the paper.

Chemical and Ordinary Gel

This chemical gel made from the glue is different from the ordinary gel formed by cooling a glue solution in that it is stable at fairly high temperatures and will not be dissolved by water but will melt at the temperature attained on the drying cylinders, forming a homogeneous combination between the various parts of the paper and producing a hard paper of the best sound and touch. In other words, by this treatment of the glue we have succeeded in doing what hitherto has been impossible to accomplish. We have on the one hand a gel which is not insoluble and unmeltable as the gel formed with mormaldehyde and other coagulating agents, and on the other hand we do not have a gel such as is formed by glue solutions which when they cool will be dissolved in the beater.

High Retention of Glue

The retention of the glue in the paper having the chemical agent added to it, in accordance with the Asa process, is quite high, even reaching 90 per cent. Unfortunately, the patent situation at present is not such as permits us to discuss fully the chemical nature of the reagents which are used to change the gel from a readily melting one to one which melts when at the high temperature of the driers except in such cases where we make contracts with paper companies.

Either bone glue or hide glue may be used in this process. There seems to be little difference between these two forms of glue. The hide glue has perhaps a slight advantage but not more so than its additional cost. So that, prices being considered, the two types of glue are approximately equivalent. In this connection it may be mentioned that the lower priced glues serve well in the new process.

In a typical run the new process would be carried out in the following simple way:

A Typical Run

A glue solution of 1 part of glue and from 6 to 12 parts of water, depending upon the quality of the glue, is converted into the desired gel by adding this special chemical which we ordinarily call the "Asa Solution." If loaded paper is to be made, the filler is thoroughly to be mixed before adding asa solution, with the glue solution until a homogeneous emulsion is obtained. This gel is then added to the beater and the paper made as usual. On the drier the gel melts and dries and there is formed a homogeneous mixture of fiber filler and glue, which is thoroughly cemented together and well sized. Under ordinary circumstances 2 per cent of dry glue is sufficient to give most excellent sizing though for special purposes 4 to 8 per cent of glue is sometimes used.

Substitution of Clay and Other Fillers

There might be objected that rosin is cheaper than glue. However, it is to be considered that, with the use of the new process, paper pulp of the more expensive grades even can be saved by the substitution of clay and other filler without decreasing the quality of the paper. Some mills have claimed that by the use of the Asa process they are able to get a retention of more than 90 per cent of the clay filler used. When one compares this with the ordinary rosin sizing where 50 per cent or more of the filling material often passes through into the white water, the advantage of the new process is at once seen. There is no difficulty in producing a paper with 20 to 30 per cent filler without or with but slight change in character of paper. With the use of a higher amount of filler the paper naturally changes its character to an appreciable extent.

The Most Economical Process

Moreover the most economical process will be a combination of the rosin sizing with our process by which we may avail ourselves of the cheap rosin for the ordinary sizing and of the glue for the purposes mentioned before, and, thus we secure all advantages resulting from the ordinary surface sizing without its disadvantages. So it has been found that 1 per cent of glue to which the Asa solution has been added, and 0.25 per cent of rosin gives a sizing which is fully equivalent to the sizing of the ordinary type using 4 per cent rosin.

Conclusions

The Asa process consists in the use of a chemical agent which transforms the glue into a gel. This gel is stable at the temperature in the beater so that it will not be dissolved there but will melt at the temperature on the drying cylinders, forming a good connection between fibers and filler. The advantages of this process are:

(1) A small loss of glue on the wire;

(2) Small loss of fillers;

(3) Quality of paper is considerably improved, or

(4) The same quality of paper can be produced from inferior raw materials;

(5) This process which is cheaper and simpler than other sizing processes eliminates the use of surface sizing but gives the same results.

For Making Paper Stronger

Aside from the purpose mentioned before the Asa solution can serve for the treatment of paper for making it stronger. Paper treated in that way can be used as a substitute for parchment paper being almost greaseproof.

Water marks are easily impressed into these papers.

Technical Section Page 131

USE OF ULTRA VIOLET LIGHT IN DECIPHERING DAMAGED DOCUMENTS*

FONZES-DIAGON, FAUCON AND REYNAUD

The authors of this note were entrusted with the task of reconstituting the text of a will, the writing of which had been almost completely destroyed by an accident. The document had remained for a certain time in contact with a concentrated soda solution (36° Baumé), and only a few words were legible. Even the fibers had been attacked, and were swollen in certain places, forming a yellow mass colored by the iron oxide of the ink which had been diluted and had diffused through the whole mass.

On the large surface which had been thus attacked not the least

PHOTOGRAPH OF WILL

sign of writing could be distinguished with a magnifying glass, the few words which could be read being on those portions of the paper that had not been in contact with the soda.

Nevertheless, we attempted to bring out the original writing, first by chemical methods, then by photographic methods, and finally by various physical methods. The tests were first carried out on some worthless documents, which we subjected to a treatment with strong soda solution similar to that which the will had undergone.

Chemical Methods

We tried the usual well-known methods for showing up any traces of the iron of the ink which might have remained under the destroyed writing, using the most sensitive reactions known for detecting iron.

The documents which we used for experimenting purposes were first washed free from alkali and dried. They were then spread on a porcelain plate or on the bottom of a porcelain dish, and the surface was repeatedly impregnated with the reagent. After a suitable preliminary treatment, to bring the iron to the proper state of oxidation, the following reagents were tried out: tannin, ammonium sulphide, potassium ferrocyanide, potassium ferricyanide, etc. These various tests gave but very indifferent results; the marks revealed were light and indistinct, and moreover there were formed colored blotches which spread throughout the paper.

This shows that chemical methods are not sufficiently sensitive and have the very serious drawback of further deteriorating the documents.

Photographic Methods

Owing to the power of modern lenses and the sensitiveness of photographic plates, we thought we might obtain better results in this manner. We tried various illuminations and times of exposure, but our attempts to bring out the writing in this manner were unsuccessful. When the will was applied directly on bromide plates which were then overexposed in diffused daylight and developed with hydroquinone without addition of bromide, the results were hardly any better.

X-Rays

Here again we met with a failure, the difficulty of reading being increased by the fact that the will was written on both sides of the paper, which greatly confused what little writing showed up on account of the opacity of the iron salts to the X-rays.

Heat

We observed that when the paper was left several hours in an air bath at a temperature of 110° to 120° Centigrade, the writing showed up a little more clearly, but not to such an extent that it could be read with any certainty.

As this treatment did not deteriorate the paper in any way, we heated the will for a long time at 110° Centigrade, and the writing seemed to show up a little better; but it could not be read.

Ultra-Violet Light

It is at this stage that we thought of using the fluorescence caused by ultra-violet light to intensify what little results we had obtained by means of heat. The first test was made with an arc struck between iron electrodes: the writing showed up with a pronounced fluorescence which even permitted of deciphering certain words, but not the whole document. And it was only by using a much more powerful source of ultra-violet light that we finally obtained a definite and satisfactory result.

Professor Pech, who is making biological investigations on ultra-violet light, kindly placed at our disposal a 220-volt mercury vapor arc equipped with a Wood screen which filtered out all radiations except those having a wave-length of about 3650 angstroms. We exposed the will in a dark room to the rays from this lamp, waiting a considerable length of time to accustom our eyes to the light conditions, and making several attempts before we found the most favorable angle of incidence of the light on to the paper. Finally, the writing showed up completely, and the fluorescence was strong enough that we were able to read every word.

Unfortunately we were not able to photograph the document as we saw it, and we had to content ourselves with transcribing the text of the deed without producing a photographic record in court; for the photogenic properties of the paper and of the fluorescent writing do not differ sufficiently to allow of their photographic reproduction.

*Translated from *Les Annales des Falsifications et des Fraudes* xvii, 20-23, January, 1924, by A. Papineau-Couture.

SPECIAL MOISTENING OF CHROMO PAPER*

By E. Arnould

The manufacture of chromo papers is one of the most difficult branches of papermaking, and it causes endless worry and trouble to paper manufacturers and dealers, as well as to printers. It is not sufficient to know how to make paper, in order to make good chromo paper; it is practically indispensable to know the conditions under which it will be used and to be familiar with the secrets of the printing art. It is also very important to be able to obtain the proper degree of moistening and evening distribution of the moisture to prevent the paper from being spotted or from turning grey or black. The simplicity and ease with which the paper can be moistened as it is being reeled have led to the abandonment of other methods of moistening, which, though more expensive, gave better results. This method certainly looks very easy at first sight, and at present it is the one in universal use; but I am convinced that it is not all as plain sailing as it looks and that it is at the bottom of most of the claims brought by printers against paper mills and causes a considerable loss to the latter.

Usual Practice of Manufacture

Let us consider the manufacture of a chrome weighing 200 or 300 grams per square meter. The usual practice is to dry it very thoroughly and then moisten it so as to reincorporate 6 per cent of moisture. Well, is it an easy and practical matter to spread about 20 cc. of water over a square meter of paper? Further, any papermaker who has had experience with this grade of paper knows how difficult it is to reel such a heavy paper after moistening. The roll, instead of winding straight, has such a tendency to go to the right or to the left that it prevents the formation of large rolls and causes a considerable amount of waste.

It certainly seems that it would be more rational to dampen by applying 3 per cent on each side of the sheet instead of the whole 6 per cent on the one side, and the affinity of the hot paper for water would allow it to absorb the moisture quite rapidly. This is not generally done and yet it is a mistake not to instal sprays for both sides of the sheet.

It may be objected that, though the water is applied to one side only, the dry side comes in contact with the wet one when the paper is reeled and that the moisture is thus evenly distributed in the paper. The proof that this actually does not occur, except when the paper is stored a very long time before supercalendering, is the fact that the side of the sheet which was dampened becomes much greyer than the other on supercalendering.

Now, can the most careful and observant of papermakers estimate with any degree of accuracy the amount of water being distributed on the paper? The only method of control used is to take a sample of the paper as it comes to the reel and dry it to determine the percentage of moisture which it contains. Suppose a sample weighing 180 grams loses 12 grams on drying completely. We then know that it contains 7.14 per cent of moisture at the reel; but it does not tell the amount of water being added by the dampener, as we do not know the moisture content of the paper when it reaches this device. The result obtained represents the moisture contained before dampening, plus the water added at the dampener, minus a certain amount which is evaporated between the dampener and the reel. The moisture content and temperature of the paper as it comes from the driers can, and do, vary to a considerable extent at times, and this in turn affects the amount of water absorbed by the paper and evaporated after the dampening.

I have repeatedly had occasion to observe that the moisture content of chromo papers which had been stored in sheets for a few days had decreased from 1 to 1½ per cent. The loss is much less when the paper is in rolls.

Seldom Calendered in Rolls

Chromos are very seldom calendered in rolls, first of all because such a heavy paper is hard on the calender rolls, and also because even when this is done the paper must be put through a plater anyway.

If the paper has been allowed to stand a couple of days after cutting into sheets and still contains about 5.5 to 6 per cent of its added moisture, practically no trouble is experienced in plating, and the paper is given three passes through the machine. But if the paper is not dry enough, which happens quite frequently, or if it has been insufficiently dampened, it is impossible to obtain proper results. In the first case the paper becomes covered with spots, all the marks of the calender show up, the paper blackens, and any particles of iron which may be present are oxidized and show up; the paper is irremediably spoiled. On the other hand, if the paper has not been sufficiently dampened, it wrinkles and it becomes impossible to give the proper degree of gloss. This shows how very important it is to first of all dry the paper thoroughly and then to add the requisite amount of moisture.

But it must not be imagined that proper calendering is the only reason for which it is imperative that this grade of paper be properly dampened; for this operation has a bearing on the behavior of the paper during storage.

As a rule, printers are short of space for storing their paper, and, furthermore, they do not take any steps towards ensuring uniform temperature and moisture conditions. But if the paper deteriorates through having dried out or taken up too much moisture along the edges, it does not remain flat and it wrinkles on the press; and then the papermaker is blamed for having delivered defective paper. And even if he spoils several reams, with loss of colors and of time, the printer still blames the paper mill and puts in a claim, not only for the paper lost, but also for the other materials and the time which he has lost through his own fault.

Lack of System Common

I have had occasion to visit large printing establishments in various places, and in most cases I have come away with the impression that things are in a bad way and that lack of system and of the most elementary precautions prevail almost everywhere. The carelessness with which the paper is handled is in striking contrast with the care with which it is treated in the finishing room of the paper mill.

I recall going to an establishment where the mill with which I was connected at the time had delivered 10 tons of chromo, which had been packed with particular care. On trying out the paper it wrinkled all over, and an attempt to overcome this by calendering was of no avail; the paper was absolutely unfit to be used. In looking around, I noticed that the paper had been stored in a room surrounded on all sides by venetian blinds, and situated practically on the bank of a river. As a result, the edges of the sheets had absorbed an excess of moisture and had expanded; and the only way left to make them flat was to trim them down on the four sides to a smaller size.

Some time after this occurrence I learned that one printer, under somewhat similar circumstances, had taken the trouble to expose the reams to a hot draft which dried out the edges to such an extent that one pass of the sheets through a plater made them quite flat once more.

In order to facilitate handling, chromos are generally packed in quarter or half reams, and the wrappings are pasted to prevent any unevenness in thickness when the reams are piled on top of one another. Moreover, a sheet of heavy paper is placed on top and at the bottom of each package, inside the wrapping, to protect

*Translated from *La Revue Universelle de la Papeterie et de l'Imprimerie*, vi, No. 60, 14-16, December, 1923, by A. Papineau-Couture.

the paper against the water used in pasting. When it is to be printed in several colors, requiring that it be put through the printing press several times, the printer usually has the paper plated between zincs.

But no matter how well and carefully the paper has been manufactured, it is subject to changes with the atmospheric conditions, and there is no way of making it absolutely independent of such changes. But I have observed a very considerable improvement by dampening it with a mixture of 1 part of glycerine and 10 parts of water. This procedure has several advantages:

(1) The glycerine gives the paper a certain hygroscopicity which protects it to a considerable extent from the effects of variations in atmospheric conditions;

(2) It makes it softer, without impairing its strength, so that it can be readily printed with the finest characters;

(3) It improves the work done by the calender or plater, giving a brilliant and durable gloss;

(4) It makes the ink and colors dry more quickly; and consequently

(5) It makes for better and cleaner impressions, as there is less danger of smearing.

Hard to Recognize by Touch

The paper thus prepared has no odor, and it requires considerable experience to be able to recognize it by the touch.

In carrying out this treatment, the paper is first dried to a moisture content about 3 or 4 per cent lower than is usual, after which it is cut into sheets and sorted. The sheets are then placed, two by two, between felts which have been soaked in the glycerine solution and then passed through rolls covered with soft rubber to squeeze out the excess of solution. When the alternate sheets of paper and felts have been piled sufficiently high, they are covered with a board which is slightly weighted and allowed to stand about 8 to 10 hours. The sheets are then taken out and replaced between the felts, and allowed to stand for a day. A few hours after taking them out for the second time the sheets are passed through the plater three times, as usual. This method has given really remarkable results along the lines outlined above. Tests showed that the most careful calendering or plating reduced the moisture content by only half a per cent; and to obtain such a result by the ordinary method it would be necessary to adjust the moisture content of the paper to the hygrometric conditions in each case, which is practically impossible in mill operations.

Look for New World Safety Record

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., March 31, 1924.—Employees of the Kimberly mill of the Kimberly-Clark Company are endeavoring to establish a new world safety record and, in order to do so, it must operate until May 5, 1924, without a lost time accident. The present record is held by the Niagara mill of the Kimberly-Clark Company. The Kimberly mill now has about 68,000 man-days without an accident to its credit, but it must pass the 100,000 mark to establish a record. The employees are divided into groups in a contest for safety. The Kimberly-Clark Company mills have been singularly free from accident since the safety movement was inaugurated a few years ago.

Eagle Log Delegates Return From Buffalo

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., April 1, 1924.—Delegates from Eagle Lodge Papermakers returned home Friday last from Buffalo after waging a bitter but unsuccessful fight in the interests of Jeremiah T. Carey of Albany, N. Y., who was counted out for re-elections as president of the International Brotherhood of Paper makers. Mr. Carey's only hope of regaining his position lies in the court verdict. Judge Edward N. Smith is now considering the testimony submitted to him at a recent hearing.

TECHNICAL SECTION PAGE 134

B. T. McBain Resigns

PORT EDWARDS, Wis., March 31, 1924.—B. T. McBain, director of manufacturing and assistant general manager of the Nekoosa Edwards Paper Company, with mills at Nekoosa and Port Edwards, Wis., has tendered his resignation, asking that it be made effective July 1, 1924. It is understood that his three-year contract is up on April 15.

Mr. McBain has taken an active interest in Association work since coming East from the Pacific Coast, where he was operating manager of the Crown Willamette Paper Company's mills in Oregon and Washington, manufacturing over 600 tons per day of news, wrappings and tissues.

He is now a member of the Executive Boards of the Technical Association of the Pulp and Paper Industry, The Woodlands Section, The Pulp Section of the American Paper and Pulp Association, third vice-president and member of the Executive Board of the American Pulp and Paper Mill Superintendents' Association, chairman of the Kraft By-Products Association of Minnesota, Wisconsin and Michigan and secretary of the Wisconsin Forest Protective Association.

It is understood that he is going to return to the Pacific Coast, in connection with a new enterprise in his chosen line, and that he will continue in the pulp and paper manufacturing business, which has had his undivided attention for the past 30 years, though he has not yet positively stated what his new connection will be.

He has just recently returned from a three weeks' trip to the Pacific Coast, where he went to investigate some matters for his present connections.

How to Pile Groundwood

We have had some difficulty in the past with pulp we take from storage pile, being burned in the center of the pile, and are writing to ask if the Technical Association has ever taken up the question of the proper method of piling lap pulp which runs around 35 per cent dry. If it has taken up this question, would appreciate your advising its recommendations as to the best method of piling.

We have piled our pulp, usually in one large pile, interlocking the laps in the outer edge and piling them straight in the center. We have piled as much as 1,500 or 2,000 tons of pulp in one pile, and run it up as high as 40 ft. Most of our neighbors pile their pulp the same way, although we understand some mills make much smaller piles. There is an objection to the smaller pile, also, to our way of thinking, in that too much of the pulp becomes exposed to the sun and rain and blackens. It is very difficult to beat out when it is being worked up.

Any information you can give us on this subject would be very much appreciated.

Note: I shall appreciate having replies which will be handled in the usual way.—THE SECRETARY.

Wisconsin Fourth in Paper Making

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., March 31, 1924.—Wisconsin's 60 paper mills are making 624,738 tons of paper a year, equivalent to 612 pounds for each resident of the state, J. D. Jones, State Commissioner of Agriculture, said in an interesting report on the state's industries. Nearly 17,000 men and women are employed in the mills of the state, a sufficient number, as families are rated, to make a city of 80,000 people. The annual payroll of the Badger paper industry is $20,725,000. The state's paper and pulp product is valued at $88,546,000, and Wisconsin ranks fourth among all the states in the Union in paper manufacturing, making 11 per cent of the total production of the country.

The first paper mill in Wisconsin was established in 1848 in Milwaukee, and the next year it was purchased by D. E. Cameron, who boasted that his production of 112 reams a week was sufficient to supply the press of the entire state.

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

CLARENCE J. WEST, Chairman

Alkaline Process

Furnace for the Destructive Distillation of Black Liquors. A/B Cellulosa. Swed. pat. 51,239. The gases from the distillation are used, either alone or in conjunction with steam, to heat the mass to be distilled. They pass alternately over the surface of this mass and through heating elements communicating with the distillation chamber. The material to be distilled is spread out in thin layers on a series of trays on small wagons placed in the furnace. The trays are so arranged that they form horizontal passages throughout the whole length of the kiln.—A. P.-C.

Recovering Heat and Reagents from Black Liquor. Societe Maunoury & Cie. Fr. pat. 558,183. The unconcentrated or partially concentrated liquor is mixed with fuel oil in sufficient amount to ensure complete combustion and burned, preferably under a boiler. It is claimed that the ash thus obtained is much purer than by the ordinary processes, and that it is practically free from unburnt carbon.—A. P.-C.

Recovering Alkali from Soda and Sulphate Black Liquors. A. Cleve von Fuler. Swed. pat. 51,859. The black ash is electrolyzed, and the resultant alkali metal on coming in contact with water directly gives alkali hydroxide suitable for the production of pulp.—A. P.-C.

Preparation of Soda Liquor. Raffaele Sansone. *Papeterie* 45, 890-894 (Sept. 25, 1923); 945-949 (Oct. 10, 1923). Brief description of the various methods.—A. P.-C.

Ford Hard Wood Process. J. L. McCloud. *Paper Mill* 47, No. 41, 70 (Oct. 13, 1923). A description of the process used by the Ford Co. for the production of soda pulp from hardwood scrap from the body plant and from waste paper accumulated at the same plant.—A. P.-C.

Continuous Recovery of Lime Sludges from Causticizing Operations. Glamorgan Pipe & Foundry Co. *Paper Trade J.* 77, No. 18, 52-56 (Nov. 1, 1923). A description of the system constructed by the Glamorgan Pipe & Foundry Co., which consists essentially in filtering the sludge on a single-compartment open-drum filter with hot water sprays for washing, and dropping the cake directly into the kiln. The relative merits of producer gas, fuel oil and pulverized coal as fuel are discussed. The advantages of the system are: (1) Reduction of alkali loss in the liquor room to 0.5 to 1 per cent (this small amount of alkali is returned to the causticizer with the lime, so that there is really no loss of alkali); (2) decreased steam consumption, as two batches will be required per cycle instead of four or five; (3) saving of overflow tanks during the making up of the extra wash batches; (4) increase in storage capacity of 100 to 200 per cent; (5) corresponding increase in settling capacity resulting in clearer liquor to the digesters; (6) maintenance and repairs considerably decreased. The sludge should be filtered hot (at least 60 to 80 deg. cent.) and the cake should be washed with hot water. The sludge should not contain over 5 per cent of free lime.—A. P.-C.

Production of Unripe Alkali-Cellulose for Viscose. Richard Schwarzkopf. Ger. pat. 377,120. *Papierfabr.* 21, 461 (Oct. 7, 1923). Pulp is agitated with an excess of sodium hydroxide solution for about 20 min. at a temperature higher than 18 deg. cent., after which the alkali is removed by centrifuging and the viscose is pressed.—J. L. P.

Use of Chlorine in the Manufacture of Cellulose. Ardisson de Perdiguier. *Chimie et Indus.* 10, 420-436 (Sept., 1923). The author answers various assertions and claims of Pomilio as regards the relative merits of the Cataldi and de Vains processes of manufacturing pulp by means of chlorine. (See *Pulp & Paper* 20, 840, 2047, 1922).—A. P.-C.

Continuous Chlorination of Ligno- and Pecto-Cellulose by Nascent Chlorine for the Production of Cellulose. A. R. de Vains. Eng. pat. 201,488, Dec. 19, 1922. An aqueous suspension of pulp is fed continuously together with a solution of an alkali or alkaline-earth hypochlorite and a dilute mineral or organic acid, capable of liberating chlorine from the hypochlorite, into a closed mixing vessel provided with an inlet and outlet pipe. By this means chlorination is effected by nascent chlorine.—A. P.-C.

Process for Treating Fibrous Material with Chlorine. Percy Waentig and Richard Ziegenblag. Ger. pat. 380,942. *Papierfabr.* 21, 458-459 (Oct. 14, 1923). Liquid chlorine is allowed to distill into aqueous suspension of the fibrous material in a suitable apparatus. The reaction container is kept at 30 deg. cent. The fibers may also be suspended in a salt solution.—J. L. P.

Purification of Chlorinated Pulps by Means of Alkaline Solutions. Antoine R. de Vains. Ger. pat. 382,518 *Zellstoff U. Papier* 3, 231-232 (Oct., 1923). Pulps, after chlorination, are treated with solutions of the alkali or alkaline-earth metals for 10 to 15 min. Subsequent washing yields a pulp of high purity.—J. L. P.

Process for the Purification and Altering the Physical Nature of Pulps. Carl G. Schwalbe and Ernst Becker. Ger. pat. 379,268; addition to 369, 606. *Papierfabr.* 21, 406-407 (Sept. 2, 1923); *Zellstoff U. Papier* 3, 213-14 (Sept., 1923). Pulps of half-stuffs are treated with an oxidizing agent, as nitric acid, nitrous acid, hypochlorous acid, permanganates, perchlorates, perborates, sodium peroxide, hydrogen peroxide, sodium hypochlorite, chloride of lime, etc., washed, and later subjected to the action of alkaline-earth oxides for a longer time at the boiling temperature and under pressure.—J. L. P.

Process for the Purification of Pulps for the Manufacture of Cellulose Esters, Artificial Silk and the Like. Erich Opfermann. Ger. pat. 379,771. *Papierfabr.* 21, 415-416 (Sept. 9, 1923). Pulp is given a combined mechanical and chemical treatment in a kollergang or stamping mill with either alkaline carbonates or sulphides, waterglass, or highly concentrated solutions or suspensions of the alkaline-earth metals, depending upon the nature of the pulp and the degree of refining desired.—J. L. P.

Modern Types of Evaporators. W. L. Badger. *Chem. Met. Eng.* 29, No. 11, 475-478 (Sept. 10, 1923). A discussion of some of the fundamentals of evaporator design and construction and their relation to performance in various industrial applications—A. P.-C.

Method of Preparing Sulphate Cooking Liquor by Means of Sulphur. Geo. A. Richter and D. H. McMurtrie assignors to Brown Co. U. S. pat. 1,469,960, Oct. 9, 1923; *Paper Trade J.* 77, No. 24, 54-55 (Dec. 13, 1923). Instead of making up the loss of sulphur in sulphate black liquor recovery by means of salt cake, it is made up with sulphur in conjunction with soda ash. It is claimed that this makes possible a desirable increase in total sulphur to total ratio of the liquor. Since carbonate may be added either just before smelting or just previous to causticizing, it is possible to control the composition of the resulting liquor very carefully. The sulphur and sodium carbonate are added to the concentrated black liquor in a vat from which it is pumped into a heated coil where the mixture is "exploded" and from which it is forced into the upper part of a combustion chamber in which an oxidizing atmosphere is maintained. The sulphur burns to SO_2 which com-

bines with the soda ash to form sodium sulphite. A reducing atmosphere is created in the lower portion of the combustion chamber to reduce the sulphite to sulphide. The molten soda salts flow downward on the sloping floor and into the vats where it is dissolved, and causticizing and filtering are carried out as usual.—A. P.-C.

Pulp Manufacture by Chlorination. Willi Schacht. *Papierfabr.* 21, 521-526 (Dec. 16, 1923). A technical, critical review of the chlorination processes for the production of pulp, notably those of Cataldi or Pomilip and de Vains. The latter process, in which the chlorine is used as the hydrate in aqueous solution, has found greater use than the former, in which the gas is employed. Straw pulps produced by this process invariably have high copper numbers, as high as 9 in one case, showing that careful control is essential. Considerable space is devoted to the de Vains process.—J. L. P.

Process for Purifying Colored Alkali Liquors, Contaminated with Hemicellulose. Fr. Kuttner and Ernst Profeld. Ger. pat. 381,798; addition to 355,836. *Papierfabr.* 21, 475 (Oct. 28, 1923). The liquors are treated with peroxides of the alkali or alkaline-earth elements in the presence of certain metals as catalyzers, as copper or lead.—J. L. P.

Mechanical Processes

Development in Wood Grinder Construction. K. Klimpke. *Zellstoff U. Papier* 3, 234-235 (Oct., 1923). A short article on the development of wood grinder construction within the last 25 yrs.—J. L. P.

Steamed Mechanical Wood Pulp. Anon. *Papierfabr.* 21, 412-415 (Sept. 9, 1923). A general discussion of the manufacture of steamed mechanical wood pulp. By means of the Enge process, which consists in treating the wood with cheap chemicals to remove the natural dyestuffs and other soluble substances followed by grinding, there is the possibility of utilizing wood of inferior quality for the manufacture of useful paper halfstuffs.—J. L. P.

Wood Grinder with a Wrought Iron Housing. Franz Peter. *Wochel. Papierfabr.* 54, 2693-2694 (Oct. 6, 1923). A brief discussion of the relative merits of cast iron and wrought iron housings for wood grinders.—J. L. P.

Magazine Grinder. Peder Christian Schaanning. Ger. pat. 379,718. *Papierfabr.* 21, 423 (Sept. 16, 1923). A horizontal piston device is used to force the wood, fed from above, against the stone.—J. L. P.

Disintegration of Wood for Mechanical Pulp. John J. Case. *Chem. Met. Eng.* 29, No. 11, 439-440 (Sept. 10, 1923). A brief discussion of the mechanism of grinding. (The author's chemical knowledge is not in accordance with generally accepted theories, as shown by statements to the effect that "in the grinding process the cellulose fibers are separated from the lignin, which is softened and washed away," and "the other constituents are also evaporated or decomposed by the heat generated by the grinding process, which leaves available the cellulose fiber."—Abs.)—A. P.-C.

Mechanical Pulp

Combination Operating and Load Regulating Valve for Pulp Grinders. *Paper Trade J.* 77, No. 23, 48 (Dec. 6, 1923). A description of the Nekoosa load regulating valve, which consists of a combination of the ordinary grinder valve and an auxiliary valve through which a high pressure operates to control the load when pockets are being filled. When the main valve lever is moved to reverse a cylinder, the auxiliary valve is automatically opened, increasing the pressure in the remaining pockets to make up for the pocket being filled; and as soon as the pressure foot in the latter begins to press again on the wood the auxiliary valve is closed.—A. P.-C.

The Three-Pocket Small Grinder as Against the Magazine Grinder. F. W. Roberts. *Paper Ind.* 5, 1412 (Dec., 1923). With three-pocket grinders taking 24 in. wood, the cost of labor would be approximately double that of magazine grinders; and the cost of getting the wood to the grinder is generally greater in the former case than in the latter. With modern three-pocket grinders taking 32 in. wood, the amount of wood handled per man is approximately the same as with Voith magazine grinders, while the stone cost per ton and the h. p. per ton of pulp are lower with pocket grinders, and the quality of the pulp is better.—A. P.-C.

Treatment of Grindstones. William A. Munro. *Paper* 33, No. 8, 3-5, 19 (Dec. 13, 1923). The chief factors affecting quality and production of groundwood are peripheral speed, pressure of the wood against the stone, temperature in the grinder pit, and cutting surface of the stone, the last named being by far the most important and the most difficult to keep constant. The effects of various methods of stone dressing on the quality and properties of the pulp are discussed.—A. P.-C.

Wood Grinder. Mario De Pretto. Ger. pat. 384,731. *Papierfabr.* 21, 502 (Nov. 25, 1923). A new wood grinder is described by which wood is ground under water.—J. L. P.

Development of the Wood Grinder. Anon. *Papierfabr.* 21, 437-439, 445-447, 454-456, 462-463, 471-473 (Sept. 30; Oct. 28, 1923). A series of articles covering very completely the development of the wood grinder.—J. L. P.

Regulator for Wood Grinder. Georg Nenzel. Ger. pat. 381,683. June 16, 1922. *Zellstoff U. Papier* 3, 249 (Nov., 1923). A device is described for regulating the feed in a mechanical way to a grinder stone so that it is continuous.—J. L. P.

Groundwood. Lyman Beeman. *Paper Mill* 47, No. 18, 30 (Nov. 3, 1923); *Paper Ind.* 5, 1253-1257 (Nov., 1923). A discussion of groundwood control by means of the freeness or sedimentation test, on the stock both to the paper machine chest and from individual grinders, with a view to maintaining uniform and optimum quality.—A. P.-C.

Grinding Temperature of Wood Pulp. Johannes Teicher. *Paper* 33, No. 1, 3-7 (Oct. 25, 1923); No. 2, 3-5 (Nov. 1, 1923). See *Pulp & Paper* 21, 558 (May 31, 1923); *Paper Trade J.* 77, No. 3, 52 (July 19, 1923).—A. P.-C.

Poplar Wood as a Substitute in the Manufacture of Groundwood. W. A. Munro. *Paper Trade J.* 77, No. 20, 60 (Nov. 15, 1923). Poplar is advantageous as a pulpwood owing to its exceptionally rapid growth. It should preferably be peeled in the woods in the spring and allowed to season at least six months; but if this is not possible it should be pounded or soaked before barking. Though poplar has a short fine fiber it acts quite free on the paper machine wire under the same conditions that would make spruce acceptable. When ground under similar conditions poplar shows a freeness of about 50 points higher than spruce. The effective pressure should be around 25 to 30 lb. per sq. in. of pocket area. Quality is affected by pressure but still more by the surface of the stone. Temperature should be maintained at 100 deg. Fahr. to 140 deg. Fahr. Poplar requires less power per ton than spruce, it being about 60 to 65 h. p. for machines running over 600 ft. per min., and the yield is about 2,510 lb. per rossed cord (varying with the moisture content of the wood). The strength of poplar groundwood is about four-sevenths that of spruce. It makes a fine filler when carefully ground.—A. P.-C.

Mechanical Equipment

Centrifugal Pumps for Handling Pulp and Paper Stocks at Various Consistencies. R. W. Pryor, Jr. *Paper Trade J.* 77, No. 22, 43-45 (Nov. 29, 1923). The essentials of a stock pump, in order of importance, are given as: dependability, accessibility, efficiency, interchangeability. Each of these is discussed in turn, and the Buffalo pump, which is claimed to combine these characteristics, is described.—A. P.-C.

Transportation Within Paper Mills. Russell B. Williams. *Paper* 33, No. 7, 13-14 (Dec. 6, 1923). A discussion on economies and savings effected by the application of electric hoists to the movement of materials and refuse.—A. P.-C.

Application of Flowmeters in Pulp and Paper Mills. Ralph A. Lewis. *Paper Mill* 47, No. 51, 4 (Dec. 22, 1923). A discussion of

the advantages of using flowmeters, especially steam flowmeters, to locate and eliminate waste.—A. P.-C.

New Paper Machine. *Mill* 47, No. 49, 1-2, 4 (Dec. 8, 1923). A description of the machine built by J. H. Horne & Co. for the Frank Smith Paper Co. for the manufacture of paper specialties.—A. P.-C.

Hints on Sewing the Wire. S. E. Austin. *Paper Trade J.* 77, No. 24, 51-53 (Dec. 13, 1923). Practical directions as to the best method of mending tears or cracks in fourdrinier wires.—A. P.-C.

Steam Turbine Application in Pulp and Paper Mills. A. G. Darling. *Paper Mill* 47, No. 47, 12, 46 (Nov. 24, 1923); *Paper Ind.* 5, 1451-1455 (Dec., 1923); *Paper Trade J.* 77, No. 24, 56-60 (Dec. 13, 1923); *Paper* 33, No. 9, 10-12 (Dec. 20, 1923). A discussion of the use of non-condensing steam turbines in paper mills for supplying heating, drying and process steam, thus acting as a reducing valve for bringing steam from boiler pressure to that required for heating, etc., and at the same time using it for getting mechanical or electrical power.—A. P.-C.

Screen and Felt Regulator for Paper Machines. Arthur Schubert. Ger. pat. 383,861. *Papierfabr.* 21, 491 (Nov. 11, 1923). By means of electric motors suitably arranged a regulation of the screen and felts on the paper machine is effected.—J. L. P.

New Wood Conveyor and Stacker in Finland. *Paper Trade J.* No. 26, 51-52 (Dec. 27, 1923). The apparatus consists of two endless transport cables which at both ends of the conveyor run over sheaves having horizontal axles, and between them the cables travel over rollers fastened upon brackets which are movable both vertically and laterally. The wood is loaded on the transport cables and carried to the stacker, which is hung up on the upper parts of the cables and which can travel back and forth over the whole length of the stack. Over the transport cables are strung one or more endless cables running with the same speed as the ones carrying the wood, and resting on the wood to prevent it from rolling or sliding down while it is being transported up grade. The conveyor installed at the Mantua mills, Finland, is estimated to have a capacity of about 150 cu. m. of wood, in 1 m. lengths, transported and stacked per hour.—A. P.-C.

Screen for Wood and Pulp. Peder Christian Schanning. Ger. pat. 383,859, Feb. 1, 1922. *Zellstoff U. Papier* 3, 249-250 (Nov., 1923). A round screen is so arranged as to permit the separation of fine or large particles as desired.—J. L. P.

Centrifugal Screen. Amme, Giesecke u. Konegen. Ger. pat. 380,220. Aug. 15, 1922. *Zellstoff U. Papier* 3, 250-251 (Nov., 1923). A centrifugal screen for pulp is described which claims to avoid all the disadvantages of other screens of the same type.—J. L. P.

Feltless Wet Presses for Paper and Similar Machines. J. M. Voith. Ger. pat. 377,440, Nov. 4, 1921. *Zellstoff U. Papier* 3, (Nov., 1923). The press rolls are changed to suction rolls by a suitable arrangement, so that felts are not needed.—J. L. P.

Rotating Screen for the Removal of Water from Pulp, Etc. Eisengiesserei & Maschinenfabrik. Ger. pat. 381,799. *Papierfabr.* 21, 482 (Nov. 4, 1923). A new rotating drum-screen is described for the removal of water from wood or pulp.—J. L. P.

Drying

Vapor Absorption as Applied to Boxboard Machines. J. L. Williamson. *Paper Ind.* 5, 1410-1412 (Dec. 1923). Outline of the development of paper machine room ventilation with a view to increasing production and improving quality. The vapor absorption system consists essentially in introducing warm dry air in the middle of the air pockets around the machine and at right angles to the sheet of paper, and allowing it to work out to the ends of the pockets carrying away the water evaporated from the sheet. The advantages of the system are: (1) It increases the radiating capacity of the driers and consequently also the drying capacity. (2) It gives more uniform and even drying across the entire width of the machine, thereby allowing of reducing the crowns of the press roll from 33 to 50 per cent. (3) It allows of reducing the steam pressure in the driers, with consequent decrease in drying temperature and improvement in quality; or else gives a greater production with the same steam pressure and consumption. (4) By judiciously supplying the warm air where it is most needed it reduces the amount required (especially when the machine is hooded) and at the same time drip is much more easily prevented.—A. P.-C.

Paper Drying. *Paper Trade J.* 77, No. 26, 49-51 (Dec. 27, 1923). A drying code is given, elaborated by the Drying Committee of TAPPI, whereby data in regard to steam consumption of paper machines of a large number of mills can be tabulated and assembled for comparison. The object of the comparison is to learn the most economical method of using steam in connection with the drying of paper, and the committee plans to present the results in such a way as to benefit all those co-operating.—A. P.-C.

Reduction of Paper Cost by Utilizing Waste Heat from the Paper Machine. J. O. Ross. *Paper Trade J.* 77, No. 21, 48-50 (Nov. 22, 1923). A discussion of the amount of heat required in ventilating paper machine rooms and of the use of the Briner economizer in recovering a portion of it.—A. P.-C.

Cellulose

Viscosity of Cellulose. Research Dept., Woolwich, R. D. Report No. 22, Part III, 1923. Cuprammonium solution is prepared by allowing carbonate-free ammonia liquor obtained by distilling ammonia into pure water to circulate over pure copper, in the form of gauze or turnings, packed in a tower. A slow stream of oxygen or air free from carbon dioxide is passed over the copper at the same time. The ammonia liquor used should not exceed 220 g. per l. The final solution should contain 205 g. ammonia and 11 g. copper as cuprammonium hydroxide per liter. Such a solution satisfactorily dissolves 2% of cellulose, which has been found a convenient standard concentration for comparative viscosity determinations. The solution has been found to decompose when subjected to the action of light and hence must be stored in the dark. The solution process is carried out in an atmosphere of hydrogen at slight pressure, which prevents access of air or water into the dissolving bottle with consequent reduction in viscosity and in addition appears to facilitate the solution of the cellulose. Most forms of cotton have been found to be irregular in viscosity through their mass, necessitating sampling on a large scale. The use of boiling water or dilute alkali, although improving the clarity of the cellulose solution, reduces the viscosity markedly and consequently is inadmissible. For the same reason drying at elevated temperatures is to be avoided. The effect of variations of copper and ammonia content in the cuprammonium solution on the viscosity is so considerable that in order to avoid too great an experimental error, the solution must be within very close limits. The fall in viscosity of cellulose caused by the action of light necessitates the use of dark brown or black glass bottles and darkening of the thermostat bath. Under satisfactory conditions duplicates agreeing to about 5 per cent are usually obtained and the variations should not exceed 10 per cent. The apparatus used is illustrated by diagrams and its operation described.—C. J. W.

Oxymethylfurfural from Cellulose and Its Derivatives. Emil Heuser and Wilhelm Schott. *Cellulosechemie* 4, 85-90 (Nov. 22, 1923). The reddish brown oil, obtained upon heating cellulose, viscose and hydrocellulose with 5 per cent oxalic acid, was identified as the isomeric oxymethylfurfural of Kiemayer. These three substances gave, respectively, 16, 64, and 68 per cent glucose, and 0.8, 5, and 11 per cent oxymethylfurfural. These values are in agreement with those of Heuser and Eisenring.—J. L. P.

Lignin

Lignin Content of Spruce Wood. Peter Klason. *Cellulosechemie* 4, 81-84 (Nov. 11, 1923). Polemic against Astrid Cleve von Euler, according to whom the lignin value of Klason should be raised three units. Klason's sulphuric acid method and Willstatter's hydrochloric acid method gave comparable lignin values for spruce

and pine, namely 28 per cent. Lignin contains acetyl complexes to the extent of 2 per cent of the dry weight of the wood. The proper concentration of sulphuric acid to use in the determination is a 64 per cent solution; a 72 per cent solution requires a very thorough washing of the lignin, and the values are somewhat high. The author's method of procedure is given in detail. A 100 year old spruce gave 26.6 per cent lignin, and an 80 year old tree gave 29.5 per cent. Rotholz in spruce gave from 28.1 to 37.1 per cent lignin. The alcohol-resin extract of von Euler contained some carbohydrates. Klason removes the fat and resins with alcohol after the lignin has been separated. He likens lignin to a tannin and states that an acrolein-complex is common to the substance from whatever source it is derived.—J. L. P.

Pentosan Content of Lignin. Erik Hagglund. *Cellulosechemie* 4, 84-85 (Nov. 11, 1923). Further evidence is given to support the author's contention that lignin is probably chemically combined with carbohydrates (pentosans). Lignin, by the 41 per cent hydrochloric acid method, gaven a pentosan content of 6.6 per cent, whether the treatment was for 30 min. or 12 hrs.—J. L. P.

Lignosulphonic Acid and Sulphite Liquor Lactone. S. V. Hintikka. *Cellulosechemie* 4, 93-94 (Dec. 16, 1923). If, according to Klason, the beta-naphthylamine salt of alpha-lignosulphonic acid is cyclic, and the alpha-napthylamine salt is normal, the action of alkali on them should be different. The author found that this was not the case. The sulphite liquor lactone, of Holmberg, was not observed to form in liquors derived from birch or aspen woods. The amount of lactone formed at the end of a cook is small.—J. L. P.

Standardization from the Standpoint of the Utilization of the Width of the Paper Machines and of Paper Sizes. *Papeterie* 45, 1064-1065 (Nov. 10, 1923). The size 115 x 87 cm. is suggested as being convenient for modern paper machines making fine papers, and it can be cut with practically no loss to give a variety of sizes closely approximating sizes in current use in France, England, Italy and Germany.—A. P.-C.

KILBERRY SUCTION ROLLS AT LAURENTIDE CO.

Editor, PAPER TRADE JOURNAL:

EAST DOWNINGTON, Pa., March 31, 1924.

With reference to the installation of two suction press rolls for the Laurentide Company, at Grande Mere, I wish to say that the first of these rolls was started up on February 11. It might be well to give you an idea of what was the conception of this roll. As you are aware, after starting up the suction rolls on the two new Laurentide machines, it was discovered that they were unable to carry the weight on the suction shell that they considered necessary to extract the greatest amount of water from the sheet of paper, due to the fact that the bearings of these rolls and the shell as well were considered too weak to carry the load, without burning out the bearings, and when the load had reached a pressure of about 75 pounds per lineal inch, the bearings would begin to show the effect.

The writer, of course, considered it advisable to scheme out a roll which would meet their requirements and at the same time avoid some of the defects found in this type of roll at high speeds, with the result that a design was submitted to the Laurentide Company, and the writer secured for the Downingtown Company an order for two rolls to be tried out, these rolls to be run in tandem, as a first suction press and a section suction press. The Laurentide Company demanded certain requirements, inasmuch as the rolls were to carry at least twice the weight that had been used on any of the suction rolls at that time in their mill. The Downingtown Company proceeded to build two of these rolls, one of which was installed on their No. 6 machine as a second press. This roll was installed, as before stated, on February 11 and started up at 7:15 on Monday morning, the paper being put across the roll and through the dryers and on to the reel in just about the same time and with the same ease that would be done at starting up a machine any time with an ordinary press roll, and the paper was run all day on this machine without a break. No adjustments whatever has been made on the roll since, and a unique feature of this roll is the fact that the suction box does not touch the shell, but just clears it. This the writer had conceived for some time back as a point which would go a great way towards eliminating the troubles which have been had with packings, etc., grooving the shell and wearing out packings.

With this construction of roll, it is impossible to have the box in any other condition, except in exact alignment with the roll, as same is made in the shops before the roll is shipped, there being no possible way for the operator to adjust it otherwise. This roll has been running with as high a vacuum as 19 inches, without the box touching the shell, which proves conclusively that it is not necessary to have the suction box in immediate contact with the shell, also proving conclusively that there are no large volumes of air being drawn through the sheet, as the prime object of the suction box is merely to remove the air from the under side of the sheet, thereby allowing the atmospheric pressure of the air to force the water through the sheet. This is proved by the fact that if there were large volumes of air coming through the sheet, as high a vacuum as 19 inches could not be maintained, and also if large volumes of air were passing through the sheet the sheet would be cheese cloth when it went to the next press.

As soon as this roll had shown such superior results over the other rolls, we then looked further into the matter to see if it was not possible to get a material that would stand 200 pounds per lineal inch across the face of the roll. This would mean on this particular roll of 124-inch face that the load on top of the roll would be 12 tons. The present roll is carrying about 9 tons, or 150 pounds per lineal inch, which is twice the load carried on any other suction roll.

Another object of the installation of this type of roll was to secure a bearing that would be along the same lines as the bearings used on other press rolls, namely, a self-aligning bearing of such diameter that the peripheral speed would not exceed 800 feet, as it is a well-known fact that when the peripheral speed of one surface within another exceeds 1,000 feet, the oiling question is a serious question. We, therefore, designed bearings that are only 11 inches in diameter on a roll that is 22 inches in diameter.

It is also desired that the roll be directly driven with an intake shaft, the same as any press roll, and this was accomplished in my type of roll.

Another point of superiority is the fact that the suction box not touching the inner surface of the shell makes it require less power to drive the shell, no wear on packings, no replacements and, as a climax, we might say it is the nearest fool-proof piece of machinery that has been put in a paper mill.

We are prepared to guarantee these rolls furnished either as suction couch, or suction press, to carry as a suction press more load per lineal inch, thereby allowing the vacuum to extract more water from the sheet, less power to drive the roll and less maintenance cost of any roll on the market. As the present day high-speed news machines call for the very best kind of equipment to withstand the requirements, it is evident that as suction press rolls it is necessary at these speeds to carry about twice the load on top roll as is necessary with speeds around 600 feet, in order to extract the same proportionate amount of water and, of course, it necessarily follows that inasmuch as the shell is perforated with holes very closely spaced, it eliminates considerable metal from the shell, the remaining metal must of necessity be of the very best kind to withstand the pressure.

We will exhibit a model of this roll in our Booth No. 57, and trust that it will give the paper industry a good insight of the latest thing in suction rolls.

Yours very truly,

DOWNINGTOWN MANUFACTURING COMPANY.

George D. Kilberry, Engineer.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

TO WHAT EXTENT AND IN WHAT MANNER SHOULD DETAILED COST FIGURES BE GIVEN TO DEPARTMENT HEADS?*

By L. M. Lamb, Comptroller, Greenfield Tap & Die Corp., Greenfield, Mass.

This subject or one akin thereto has been such a popular one for discussion at recent Regional Conferences of our Association, and has been so ably handled on such occasion by men of greater ability and broader experience than I possess, that I feel anything I may say on the subject will be but vain repetition, yet I think the topic, perhaps, will bear treatment from a little different angle from that which has been accorded it, so far as my reading on the subject goes, and you shall see as I proceed what that angle is.

I suppose such a question as our subject arises from the fact that ever since the Industrial Revolution and, possibly for centuries before, in fact ever since men began to accumulate capital and set about putting it to work to make profit on the labor of other men, there has prevailed an innate reticence about communicating to any extent information about the business in which one was engaged, especially about profits, costs or expenses. This idea has always prevailed pretty generally, especially with reference to anyone outside an important official capacity in connection with the business.

And, if I am not mistaken, it is only within the past few years that some industrial leaders, daring enough to break away from tradition, have discovered that such a policy has defects, and have tried out to some extent the plan diametrically opposed to the old one of secrecy in regard to everything pertaining to the business. These leaders have gone so far as to spread before their employees an entire balance sheet of the business, taking particular pains to explain its makeup and show results of operations for the financial period.

Distributing Truth First Hand

There is an old saying to the effect that "where ignorance is bliss, 'tis folly to be wise," but I say "where ignorance breeds discontent, and strikes, and riots and raises hell generally, it's folly not to put one's cards on the table if one is not ashamed of them, and let the members of one's own industrial family get the truth first hand rather than in a garbled mess third hand from some one who probably knows as little about real facts as the men he attempts to incite or instruct."

Traditions being such as they are, it is no wonder then that we tremble at thought of breaking away from them and gingerly ask if we should tell the foremen anything, and, if so, how much and in what manner.

Presumably a foreman has attained his position because of ability, in one or more respects, demonstrated in such a manner as to lead the management to select him as the head of a department. I suppose he is appointed to that job for the purpose of seeing that the policies of the management as related to the department over which he has control are carried out. In a sense he is a submanager. Perforce, he must have some spirit, some brains, some ambition, some desire for the success and prosperity of his concern, or at least the management must have *thought* he had some or all of these qualities else he would never have come within gun shot of reaching the position. In other words, he's not a dummy; he is a regular human being endowed with some common sense and at least a little intelligence.

Now then, if I have placed the foreman in the proper light, if I have placed him on the right pedestal, if he has at least the few qualities I have attributed to him, we should, for the purposes of my paper, expect him to demonstrate his co-operative and managerial ability in two ways at least:

1. Produce in his department as economically as possible; and
2. Keep direct expense within bounds since that expense, at any rate, must be under his control.

Some three thousand years ago there lived a King by the name of David. Noted in war, he was also famed as a poet and musician. The poems are preserved to this day in a Book most of you have heard of even if you haven't read it. In one of the poems is a stanza which reads, "Thy word is a lamp unto my feet, and a light unto my path." I needn't dwell upon the potency of those words because Christianity is too prevalent, too evident to require it from me. But the chances are if the Bible had never been printed, if hundreds of millions had not read it down through the ages, and tens of millions expounded and explained and exhorted, our veneer of civilization would be much thinner than it now is.

"A Light to His Path"

What I want to bring out is the fact that the word of the management, uttered to the foreman month by month in the shape of a burden statement showing actual expenditures applicable to his department, direct anyway, preferably both direct and indirect, is going to be a lamp unto him and a light to his path. And I don't see how any one can expect to secure fullest co-operation towards

*From National Assn. of Cost Accountants Year Book.

economy from a foreman in a plant or from the head of a department in an office except he does resort to some such means to show the man how the dollars under his control are being spent. And what's the harm? What great disaster impends from giving such information to a man in the line whom you have expressed sufficient confidence as to place in a position to spend money?

My concern has received, during the past four or five years, nothing but benefit from such a policy.

Each plant manager receives every month departmental statements in duplicate. One set shows direct expenses only and is distributed to foremen; the other set, retained by the plant manager, shows departmental direct and indirect expenses; also divisional expenses not related to any particular department, and they are examined and studied and many an item investigated and inquired into.

As the result of this practice, the foreman has placed before him each month a tabulation of the expenses of his department for the month just closed and comparison made item by item with expenses of the preceding month. These sheets show direct expenses only. (See Form No. 1.)

These same sheets, or copies of them, are furnished the General Manager, the General Superintendent and each Plant Superintendent, but these latter sheets (See Form No. 2) show in addition to the direct departmental expenses the prorated indirect expenses as well, and all compared with the same items for the month previous to that just closed. And, of course, all these latter sheets show the standard burden rate per hour against the actual rate and the amount of over or under absorbed burden. The foreman's sheets show only the rate per hour of the direct expenses.

How Statements Are Divided

The statements submitted to the foremen are divided into two principal sections. The first section shows about eight or ten items of burden labor and the second section about twenty or twenty-five items of expense, in the way of repairs to machinery, belts, etc., and various items of supply. The statement shows him almost at a glance any items which seem to be out of line, and gives him reason and opportunity to investigate and find the cause, and if it is unreasonable or unnecessary, to apply the remedy the following month; or if he is questioned by the management in regard to any item, he is posted on the matter and can talk intelligently on the subject. He is in a proper position to make his defense and possibly justify the expense. At all events, the management has given him the facts of the case, given him all the light it can, and now it is squarely up to him to explain anything wrong, barring errors.

I don't see how fullest co-operation of foremen in the matter of keeping down expense can be obtained in any other way. In fact, it seems hardly fair to hold them responsible for such items in the fullest extent unless such information is passed out to them so they may have knowledge of the relative importance in dollars and cents of the items under their control.

In 1920 when there came the slump in business which made drastic economies necessary, the sheets were studied and used to an extent you can hardly imagine. As an aid to effecting reduction in expenses, they stand supreme. In fact, I guess it was during that time that we really learned to use them and came to appreciate their value.

Our experience, I think, would lead us to believe without question that it is a mistake that similar practice is not more generally adopted. The sheets afford something tangible about which to confer. In case of doubt regarding any item, requisitions O.K.'d by the foreman can be produced to prove an error or verify the statement.

And bear in mind these statements are made up not only to cover the plants but each department of the office as well. But in these office burden sheets, comparison is made with budget allowances instead of the expenses of the preceding month.

Form 3 and Form 4 are sample office burden sheets. The former is a specimen of the burden account of the Financial Department classified in the Administrative section of Expense; and the latter a specimen of the General Sales Burden account classified in the Selling Expense section.

Indirect Expenses Sometimes Shown

I have been speaking largely of items of direct departmental expense. Some go so far as to show proportional charges or indirect departmental expenses and I would not say it is improper to do that.

President Jordan pointed out at the Regional Conference in Hartford that it is sound procedure to do so; that many such items are easily traced back to foremen, and cited, for example, a grouchy foreman who has difficulty retaining his help, in consequence of which he keeps the employment department working nights in order to deliver him man power in sufficient quantity. Is there not reason why he should see what his share of such service amounts to? He may clamor for and secure unnecessary equipment in consequence of which taxes and insurance and depreciation charges increase. He ought to know it and how much the increase is.

On the other hand, it is sometimes difficult or impossible to get foremen to see these things from that angle, and wherever friction or misunderstanding develops in regard to the indirect charges, it seems to me better to show only the direct charges. That has the effect of bringing those for which the foreman or department manager is most intimately responsible into the light anyway.

I have but little to say on the matter of submitting detailed cost figures to the foreman. I am rather of the opinion that management should determine what an article should cost and translate that cost into units of time and make the foreman deal with that. In other words, through predetermination of the time which an operation should take, schedule accordingly and, if the schedule is not being maintained, inform the foreman then when the information may do some good rather than after the job is completed and the cost compiled.

My company makes a practice of making up every month a sheet showing all orders finished during the month at costs which, compared with the sales prices, are not as favorable as they should be. These sheets are submitted to plant managers to investigate and improve upon if possible. And I must confess that I believe such sheets are made necessary sometimes through ignorance of competition rather than faults of either managers, foremen, or workmen. However, it has ofttimes come about as the result of co-operation on the part of the plant manager, engineering department, and foremen that new methods, perhaps involving only a change in jigs or fixtures, or dies or a change in material develop favorable results.

Foremen Often Hide Ideas

It is frequently the case, I believe, that foremen have ideas in regard to how conditions may be improved but they keep them hidden for one reason or another. I think there is quite apt to be the opinion among shop men that any one connected with the office thinks he is a superior being: a little feeling of jealousy perhaps, and when he receives from the office an order or command to carry on an operation in a certain way he is quite likely to do so rather than offer any suggestion which he may have in mind for improvement. We are all human and likely to have some pride of opinion. And it is rather a stimulant sometimes to a subaltern to have his opinion sought after. It leaves the impression that his superiors regard him as something more than a nincompoop. I think it only human nature for the ambitious to desire to show those above them in the line that they have capacity beyond that which is being utilized.

I remember when I was a youngster and on my first job of keeping books, I used to get quite incensed at times because the Treasurer of the company would never invite me to write the

checks when it came time to pay the bills. I knew my writing could be read more easily by those through whose hands the checks passed than could his, and it appealed to me as being quite a dignified job. But I never got a chance at it until after the old man died.

Distrust Causes Strife

In conclusion, let me say that I suspect a lot of our industrial strife nowadays is caused by distrust and misunderstanding of one another. There is a suspicion of purpose which ofttimes breeds discontent, and there are those scouting about the country trying to make capital out of such situations. We would get along faster if we understood each other better. Management should certainly do everything it reasonably can to promote harmony and good will among workmen. Since some concerns have gone so far in this direction as to even lay their income statements on the table or spread them on a blackboard or chart before their workmen without disaster, it would seem that the most timorous might venture so far as to arrange matters after a manner to give the foreman, the backbone of the plant, informaion as to the way his department is travelling month by month. Thus he will be furnished the lamp by which he may be guided back into the right path, provided he has strayed away, or to reassure him, provided he is still traveling in the right direction.

BURDEN ACCOUNT

	Burden Labor—	O.D.Labor and Burden	Own Labor	Material and Exp.	Total	Dept. Last Month
1	Foreman & Assistants					
2	Inspection Expense					
3	Timekeepers					
4	Cleaning and Sweeping					
5	Oiling Shafting					
6	Handling Products					
7	Work on a/c Shop Errors					
8	General Labor					
9	Idle Time					
10	Instruction Expense					
11	Dividend					
12	Bonuses					
	Total Cost per Prod. Hr.					
	Maintenance and Supplies					
15	Maintenance of Machines					
16	Maintenance of Jigs, Temp.					
17	Maintenance of Shaft, Pulleys					
18	Maintenance of Belts					
19	Maintenance of Elec. Appar.					
20	Maint. of Water, Air & P.					
21	Maintenance of Furnaces					
22	Other Maintenance					
23	Maintenance of Fixtures					
25	Dies					
26	Hop Taps					
27	Mills and Drills					
28	Files					
29	Steel Stamps					
30	Other Sm. N-Dur. Tools					
31	Emery Wheels & Abras.					
32	Lubricants & Cut. Oil					
33	Electric Lamps					
34	Gas					
35	Fuel Oil					
36	Other Fuel					
37	Misc. Shop Supplies					
38	Welding Material					
39	Bone, Cyanide, Qu. Oil					
40	Soda					
41	Insp. Exp. Other Than Lab.					
	Total Cost per Prod. Hr.					
	Proportional Charges—					
	Prop. of Div. Exp.					
	Prop. of Div. Labor					
	Prop. of Elec. Power					
	Prop. of Steam Exp.					
	Prop. of Lia. Ins.					
	Prop. of Depreciation					
	Total Cost per Prod. Hr.					
	Total Burden					
	Less to work in process					
	Balance to Direct Wages					
	Burden per Dir. Hr.					

(FORM 1)

DIVISION EXPENSE

	Division Expense—	O.D.Labor and Burden	Own Labor	Material and Exp.	Total	Plant No. Last Month
51	Superintendence					
52	Office Salaries					
53	Rec. & Raw Mat. St. Exp.					
54	Ship & Fin. Mat. St. Exp.					
55	Undis. Millwr. T. & E.					
56	Watchman					
57	Overtime Bonus					
58	Gen'l Misc. Exp.					
59	Experimental Exp.					
60	Lubricants					
61	Office Supplies					
62	Maint. of Office Equip.					
63	Maint. of Bldg.					
64	Maint. of Rds. & Grds.					
65	Maint. of Patterns					
66	Salvag. Def. Work					
67	Defective Work					
68	Meet. of Judic. Legis.					
69	Dividend					
70	Und. Tool Mt. Lab. & Exp.					
71	Insp. Exp. Other Than Lab.					
72	Water and Ice					
73	Postage					
74	Unassigned Trans. Chgs.					
75	Moving Mchy.					
76	Inventory Exp.					
80	Div. Dining, Rm. & Welfare.					
	Total					
	Proportional Charges—					
	Prop. of Plant Eng.					
	Prop. of Trucking					
	Prop. of Telephone					
	Prop. of Gen'l Supt.					
	Prop. of Ind. Rel.					
	Prop. of Gen'l Stores					
	Prop. of Purchasing					
	Prop. of Costing					
	Prop. of Pay Roll					
	Prop. of Statistical					
	Prop. of Fire Ins.					
	Prop. of Lia. Ins.					
	Prop. of Depreciation					
	Prop. of Taxes					
	Prop. of Dining Room					
	Prop. of Eng. Exp.					
	Prop. of No. 4804					
	Prop. of No. 4806					
	Prop. of Metal. Lab.					
	Prop. of Stock Maint.					
	Prop. of Prem. Dept.					
	Total					
	Grand Total					
	Distribution					
	Division Labor—					
81	Process Insp. Exp.					
82	Final Insp. Exp.					
83	Handling Product					
84	Oiling Shafting					
85	Cleaning and Sweeping					
86	General Labor					
87	Chan. to Part. Fin. Prod.					
88	Tool Crib Labor & Exp.					
89	Orders Prev. Closed Out					
	Total					
	Distribution					
	Steam Expense—					
91	Labor					
92	Maint. of Boiler					
93	Maint. of Other Appar.					
96	Coal and Other St. Fuel					
97	Other Supplies					
	Total					
	Distribution					
	Electric Power Expense—					
101	Current Purchased					
102	Labor					
103	Maint. of Transformers					
104	Maint. of Gen'l P. Lines					
105	Maint. of Other Appar.					
106	Maint. of Water P. Equip.					
107	Maint. of Generators					
	Total					
	Distribution					
	Compressed Air Expense—					
121	Labor					
122	Maint. of Compressors					
123	Maint. of Elec. Equip.					
124	Maint. of Other Appar.					
125	Oils & Waste					
126	Misc. Supplies					
	Total					
	Distribution					

(FORM 2)

BURDEN ACCOUNT FINANCIAL AUGUST, 1923

Account No. 1200

	Direct Charges—	O.D.Labor and Burden	Own Labor	Material and Exp.	Total	Budget
	Salaries—Office					
	Office Supplies					
	Sundries					
	Trav. and Ent.					
	Bonus					
	Association Dues					
	Legal and Col. Exp.					
	Exchange					
	Credit Ins.					
	Total					
	Proportional Charges—					
	Prop. of Depreciation					
	Prop. of Lia. Ins.					
	Prop. of Tel. & Tel.					
	Total					
	Total					

(FORM 3)

BURDEN ACCOUNT GENERAL SALES AUGUST, 1923

Acct. No. 2100

Direct Charges—	O.D.Labor and Burden	Own Labor	Material and Exp.	Total	Budget
Salaries—Salesmen	.....	.....	.....	.....	.....
Salaries—Office	.....	.....	.....	.....	.....
Commission	.....	.....	.....	.....	.....
Office Supplies	.....	.....	.....	.....	.....
Sundries	.....	.....	.....	.....	.....
Telegrams	.....	.....	.....	.....	.....
Trav. & Ent.	.....	.....	.....	.....	.....
Bonus	.....	.....	.....	.....	.....
Total	.....	.....	.....	.....	.....
Prcportional Charges—					
Prop. of Lia. Ins.	.....	.....	.....	.....	.....
Prop. of Tel. & Tel.	.....	.....	.....	.....	.....
Prop. of Depreciation	.....	.....	.....	.....	.....
Total	.....	.....	.....	.....	.....
Total	.....	.....	.....	.....	.....

Interesting Discussion of Paper

G. B. MILLER, National Aniline and Chemical Company, Buffalo: Mr. Lamb has placed the foremen on such a high plane that I hesitate to ask this question, but I would like to know what precautions, if any, he would take to keep cost information from getting into the hands of competitors?

MR. LAMB: We do not take any. We rely on the foreman to keep it. I think it would be a pretty good idea in some cases to let our competitors have the cost figures that our foremen get. I think that is the only way some of our competitors would ever know what to calculate for burden.

T. A. STEWART, East Aurora, N. Y.: Mr. Lamb, you mentioned labor and expense only. Do you give information about the cost of materials to foremen?

MR. LAMB: Supply materials only. Really a foreman in our business does not have much to do in regard to material.

T. B. FORDHAM, Delco Light Co., Dayton, Ohio: I would like to ask Mr. Lamb if he ties up with his general books these figures that he gives to the foremen each month?

MR. LAMB: Yes sir, absolutely.

MR. FORDHAM: Do you have requests from the foreman for these reports more frequently than once a month, and when you do send them out how long after the close of the month do you get them to your foremen?

MR. LAMB: We have a rule now that burden statements are to be issued the 17th of the month; we get them out the 15th.

MR. FORDHAM: Do you get any criticism from the foremen on account of the fact that they are getting history instead of news?

MR. LAMB: No, we get criticism when we make a blunder.

E. W. Wesp Propounded Question

E. W. WESP, The Crosby Co., Buffalo: I would like to ask Mr. Lamb if his plant is departmentalized? The foreman, we all know, is the head of his department or zone. Due to the layout (or location) of the machine tool equipment in his plant, the foreman may have two or more classes or types of machine tools in his department with like machines in other departments. If such is the case and you have in your cost system a machine tool rate and a zone or departmental burden rate, in preparing a statement of expenses monthly covering machine tool centers, how do you treat such statements, and who would you hold responsible for the excessive expenses in connection with such centers?

MR. LAMB: I believe we haven't any situation which corresponds with that of having two or three departments under one foreman.

PRESIDENT JORDAN: Do you mean that this foreman has two distinct sub-departments, or is the burden center part of some other foreman's department that he is looking after?

MR. WESP: No. A plant is divided according to zones. These zones we will call departments. The plant is so equipped that it is necessary to have the same type to the machine burden centers, calling them (foremen) for excessive idleness of machine tools due to breakdowns, etc. We do not give the foreman facts and figures on equipment proper since we have found it impossible to hold them responsible for conditions over which they have no control.

PRESIDENT JORDAN: Mr. Lamb, what have you to say on that? maintenance gang or head of the fire force.

MR. LAMB: Nothing on that subject; but something has been said as to the ignorance of competitors regarding burden. A friend of mine who went over the books of an estate that had gone into the hands of a Trustee said that he found their method of costing was something like this: In 1913 they determined their costs through specimen orders, which went through the factory and found what they thought was a reasonable cost. In 1918 or 1919 it occurred to them that costs must have gone up in the past four or five years, so they tacked on 20 per cent to their 1913 costs to cover the advance. Well, they ought to have some of our burden statements.

J. P. ROBERTSON, Smith, Robertson and Company, Seattle, Washington: I have found in my experience that a great many men are incapable of interpreting reports, irrespective of the clearness with which they are drawn up, and I should like to inquire if any attempt is made, by conference or otherwise, to explain these to the men who receive them?

MR. LAMB: Well, I hardly think we have gone into that the way we should have, but in case any part is questioned, it is explained by the cost accountant or by the plant superintendent or the general superintendent.

PRESIDENT JORDAN: Mr. Robertson, did you not mean the items on the statement?

MR. ROBERTSON: I meant a general interpretation of the items in the statement as to what they really mean.

MR. LAMB: Well; the items are sometimes questioned, and back of each item we have in the files, against the number which appears on the burden statement, all the vouchers which have gone to make up that amount.

PRESIDENT JORDAN: I think what is bothering Mr. Robertson is that the statements are in such detail that it requires an explanation as to why items are so big or so little in amount. For instance, take the labor burden. Part of it will be divided among foremen and timekeepers and watchmen, cleaning and sweeping. Below the labor burden in the departmental burden statement is the material section, in which the repairs and supplies will be divided into probably 25 items. So far as explanation is concerned, it is only the amount of money and the bearing that has on his total turnover in his department that needs to be explained to the foreman. The items explain themselves.

How Comparisons Are Made

J. M. SCANLON, Hess Bright Mfg. Co., Philadelphia, Pa.: Mr. Lamb mentioned the comparisons made and I think he said he made a comparison of the current month with previous months. I would like to know if he has used charts in making these comparisons. Another question I would like to ask is in regard to idle time. As I understand it, the statements you give the foremen are the actual expenses of a particular department. Then the actual expenses are divided by the number of machine hours, which gives you a machine-hour rate which is really the thing you look at. Then you note how much it costs you to operate that machine during the month? Now if you run into idle time, you will have a high rate. The foreman is not responsible for that. I would like to know how you cover that condition.

MR. LAMB: In regard to the first question, we have not used charts in connection with the foreman's statements. In fact, there is not any real comprehensive charting system. We use them to some extent, but only individually. For instance, the general superintendent has some charts prepared which give him a general idea of the relation of burden to productive hours, but that is for his own individual use. So far as idle time is concerned, we use the man-hour or direct-hour basis instead of the machine-hour time.

MR. SCANLON: I did not have in mind the case where a worker is waiting for a job.

PRESIDENT JORDAN: I think that what Mr. Scanlon is referring

WOOLFORD BUILT STORAGE TANKS

RIGHT CONSTRUCTION
RIGHT PRICING
RIGHT WOOD

Are the three essentials to Tank Satisfaction. We guarantee these to you. Your inquiries for all Paper Mill Tank and Tower requirements will receive our very best attention.

G. WOOLFORD WOOD TANK MFG. CO. **Lincoln Bldg., Philadelphia, Pa.**

CAMEL DYES REG. U.S. PAT. OFF.

ULTRAMARINE BLUE

Recommended for paper work on account of its extraordinary good working properties and money value. We can furnish all shades of Ultramarine Blue to suit your particular wants.

PAPER YELLOW AD CONC

Fast to light, alkali and acid. Recommended for buff, amber and golden rod shades.

MOHAWK ORANGE

A purified Chrysoidine of excellent solubility.

MOHAWK BROWN

A super Bismarck Brown

BASIC PAPER BLUE

For tinting blue whites.

Send for samples and prices

Established 1876

AMERICAN DYESTUFF MANUFACTURERS

JOHN CAMPBELL & COMPANY, 75 HUDSON STREET, NEW YORK, N.Y.

BRANCHES

BOSTON CHICAGO PROVIDENCE SAN FRANCISCO PHILADELPHIA TORONTO

STANDARDS OF EXCELLENCE

Our "Audit by Analysis"

This audit proves by analytical tests that your accounting is being done correctly.

At the same time, methods of operation are closely observed and opportunities for increasing profits are frequently pointed out.

Our "Audit by Analysis" is increasingly demanded because it is highly effective and the cost is low. Let us tell you what it will do for you.

"Good accounting pays"

Herbert W. Hill & Co.

Accountants and Auditors

105 West 40th Street
New York

HERBERT W. HILL CHAS. E. BIETH, C. P. A. JOHN MC MAHON

The John W. Higman Co.

29 Broadway **New York City**

QUALITY
CLAYS
FOR ALL PURPOSES

ENGLISH AND AMERICAN

Blotting Paper of the Best Quality

MANUFACTURED BY

THE EATON-DIKEMAN COMPANY

LEE, MASS.

Manufacturers of Blotting, Matrix, Filter and all other grades of absorbent papers.

Registered brands Magnet and Columbian, also Lenox and Arlington.

SEND FOR SAMPLES AND PRICES

to was that you are charging expenses, for instance, against a machine and you are only running it half the time, so, therefore, if you charge in everything against that machine which is only running half time, the cost goes up. He is referring to holding the foreman responsible for that higher cost.

MR. LAMB: No, we do not do that, because of course that would be unreasonable. But there are pre-determined burden rates used in abnormal times when business is dull; then, of course, there would be under-absorption of the burden. The debit balance unabsorbed would be shown on the burden statement.

PRESIDENT JORDAN: Is not the answer to your question, Mr. Scanlon, that there is a difference between cost and budget?

MR. SCANLON: Yes.

F. A. SHARP, Terry Steam Turbine Co., Hartford: I would like to ask Mr. Lamb if he supplies those statements monthly to his non-productive foremen, such as head electrician, head of the maintenance gang or head of the fire force.

MR. LAMB: No. The expense of non-productive, indirect or service department would be pro-rated over the productive or direct departments. The head of the engineering department gets a statement of his burden. The maintenance department accounts for the time spent by its men in the specific departments for which they do work. The undistributed balance is pro-rated over the plant.

D. E. BURCHELL, Harvard University, Cambridge, Mass.: As a matter of fact the maintenance men are more in the line of plumbers, carpenters and pipefitters or brickmasons, who are doing business for these foremen in the departments, and you get your check on that work by the viseing of the department foremen; in other words, they purchase the services of the maintenance crew.

MR. SHARP: I had reference more to what you might call general maintenance charges, such as the unkeep of buildings, which cannot be localized in any particular department.

H. B. FERNALD, Loomis, Suffern & Fernald, New York: I want to ask Mr. Lamb as to the follow-up or the follow-through on these statements. As I understand, they are given to the foremen as a routine matter the middle of each month. How is the follow-up made?

MR. LAMB: In our concern the general manager is usually looking for those statements about a week before they are out, and he goes over them religiously and takes up with the next in line, the general superintendent, the items of expense of the department which he thinks are out of line or unusual, and the thing starts from that point down through the plant manager and general superintendent.

MR. FERNALD: Is it made a matter of memoranda or just informal discussion?

MR. LAMB: Well, it starts as informal and then gets to formal, I guess, before it stops.

Fitchburg Bank Explains Note

F. C. Nichols, treasurer of the Fitchburg Savings Bank, Fitchburg, Mass., has requested the PAPER TRADE JOURNAL to print the following item:

"The Fitchburg Savings Bank, Fitchburg, Mass., quoted in a recent issue as a creditor of Karl Becker, now in bankruptcy, states that Mr. Becker's name appears only as a surety on a three-name note amply secured by collateral. The maker of the note is one of the richest men in New England and the collateral is absolutely good. While the bank may, through some technicality of the law, be listed as a creditor of Mr. Becker, they, themselves, have never made any such claim and will collect the note, which is a demand item and as good as gold, from the maker."

Escanaba Paper Co. Increases Stock

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., March 31, 1924.—The Escanaba Paper Company, Escanaba, Mich., announces increase in its capital stock from $3,000,000 to $3,500,000.

New York Trade Jottings

A. N. Waring, sales manager of the Bayless Manufacturing Company, will be away from his New York offices until Saturday on business.

* * *

John Berrien, of the Continental Paper and Bag Corporation, has just completed a successful trip of three weeks through the mills in Michigan and the Middle West.

* * *

Gotham Tissue Corporation, 925 Courtlandt avenue, has filed notice with the Secretary of State at Albany of an increase in its capital stock from $25,000 to $30,000.

* * *

Eric V. Bowater, of the Bowater Paper Company, 342 Madison avenue, is returning to New York, after an extended European trip, and will arrive per *S. S. Aquitania* April 11.

* * *

Atterbury & McKelvey, dealers in paper mill supplies, have removed to new offices at 11 Broadway, occupying suite 501-2. The new telephone number of the firm is Bowling Green 2148-2149.

* * *

R. S. Kellogg, of the News Print Service Bureau, and Warren B. Bullock, of the American Paper and Pulp Association, have returned from Washington, where they attended the Congressional Committee's hearings on the new forestry bill.

* * *

Robert J. Kieckhefer, president of the American Lace Paper Company, Milwaukee, was married in New York City recently to Miss Elizabeth Norton, also of Milwaukee. The ceremony was performed in Grace Episcopal Church, New York. Mr. Kieckhefer and his bride are in the Orient for a four months' trip.

* * *

Martin Cantine, president of the Martin Cantine Paper Company, and chairman of the committee representing the coated paper manufacturers before the Tariff Commission, and H. L. Derby, president of the Kalbfleisch Corporation, are on a pleasure and business trip to South America, one of the main sources of supply of casein. They have made quite an extended stay at Buenos Aires, Argentina.

Boy Scouts to Collect Waste Paper

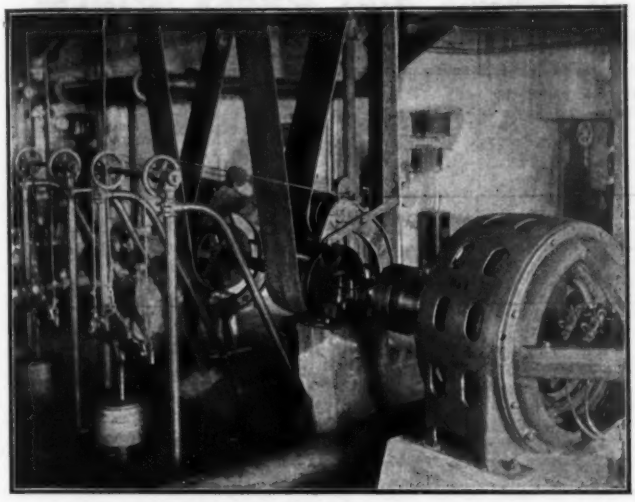
[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., March 31, 1924.—Kalamazoo Boy Scouts plan to pay for 1924 camping expenses through the collection and sale of paper stock. D. Graff & Sons are cooperating with the boys in this campaign and have furnished hundreds of bags for distribution at houses all over the city as repositories for waste material. Collections will be made at regular intervals by truck, D. Graff & Son paying the market price for all rags and waste papers collected. It is estimated the available camping fund will be augmented to the extent of several thousand dollars by this drive.

No Financing in Carthage Sulphite Co. Yet

CARTHAGE, N. Y., March 27, 1924.—Nothing tangible has yet been done toward financing the defunct Carthage Sulphite Pulp and Paper Company, said Attorney Charles E. Norris, receiver, today.

In an argument on the company's tangled finances before Judge Frank Cooper in United States district court last week the claim was made by John H. Jackson, representative of the company, that with $25,000 to satisfy creditors and provide a small working capital operations could be resumed. Judge Cooper allowed until April 5 for an agreement to be reached.



"Two Beaters driven with Lenixes from one motor"

THE LENIX* BELT DRIVE

The Lenix belt drive is now installed in more than sixty paper mills. The number of Lenix drives now in operation in all industries throughout the United States, Canada and Mexico is well over four thousand. The reasons for its success are that it is saving floor space and belting because of the short pulley centers and power because of the elimination of belt slippage. These are but a few of the advantages of the Lenix belt drive.

At the Second Paper Industries Exposition to be held at New York April 7th—12th this company will demonstrate the advantages of the Lenix belt drive over the open belt drive. This demonstration is sure to be interesting and those who attend the exposition are cordially invited to our Booth No. 90 to witness it.

F. L. SMIDTH & CO.

Engineers

50 Church St. **New York, N. Y.**

*Registered

AUTOMATIC CONTINUOUS SCREW PRESS

FOR DEWATERING PULP

ADVANTAGES

1. AUTOMATIC—requiring a minimum of labor to operate.
2. CONTINUOUS IN ACTION—hence large saving in power and increase in capacity.
3. ECONOMICAL IN POWER—small power required to operate.
4. HEAVY CONSTRUCTION—hence requiring a minimum of repairs.

AMERICAN PROCESS CO. **68 William Street, New York**

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MARCH 29, 1924

SUMMARY

News print .....79 rolls
Printing paper .....63 cs.
Hangings .....40 cs., 23 bls.
Wall paper .....288 bls., 2 cs.
Filter paper .....5 cs.
Wrapping paper .....443 rolls, 3 bls.
Cigarette paper .....137 cs.
Writing paper .....17 cs.
Copy paper .....25 cs.
Packing paper.....934 bls., 5,580 rolls, 25 cs.
Straw paper .....222 rolls
Miscellaneous paper...156 cs., 627 bls., 3,258 rolls

CIGARETTE PAPER

Rose & Frank, Collamer, Havre, 40 cs.
Liggett & Myers Tobacco Company, by same, 17 cs.
P. J. Schweitzer, Paris, Havre, 50 cs.
P. J. Schweitzer, Missouri, Havre, 25 cs.
National City Bank, by same, 5 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Maryland, London, 23 bls., 40 cs.

WALL PAPER

The Prager Company, Grootendyk, Rotterdam, 276 bls.
F. J. Emmerich, Berengaria, Liverpool, 6 bls.
A. C. Dodman, Jr., Inc., by same, 6 bls.
C. Grimmer & Sons, Paris, Havre, 1 cs.
W. H. S. Lloyd & Co., by same, 1 cs.

WRITING PAPER

Japan Paper Company, Paris, Havre, 11 cs.
Coenca Morrison & Co., La Savoie, Havre, 6 cs.

NEWS PRINT

M. Gottesman & Co., Inc., Drottningholm, Gothenburg, 63 rolls.
T. D. Downing Co., Tyrifjord, Kristiania, 16 rolls.

PRINTING PAPER

B. F. Drakenfeld & Co., Athenia, Liverpool, 12 cs.
C. Steiner, Grostendyk, Rotterdam, 51 cs.

PACKING PAPER

Import Paper Company, Grostendyk, Rotterdam, 9 bls., 13 cs
J. P. Heffernan Paper Company, Drottningholm, Gothenburg, 197 bls.
M. O'Meara Company, Innoko, Rotterdam, 8 bls.
Wilkinson Brothers & Co., Inc., by same, 12 cs.
Republic Bag & Paper Company, by same, 728 bls., 5,580 rolls.

WRAPPING PAPER

C. K. MacAlpine & Co., Drottningholm, Gothenburg, 311 rolls, 3 bls.
Nyman & Schultz, by same, 132 rolls.

STRAW PAPER

A. Vuyck, Innoko, Rotterdam, 158 rolls.
Sefton Manufacturing Company, by same, 84 rolls.

FILTER PAPER

H. Reeve Angel & Co., Inc., Maryland, London, 5 cs.

COPY PAPER

Japan Paper Company, M. Dollar, Kobe, 25 cs.

PAPER

Japan Paper Company, M. Dollar, 32 cs.
J. J. Gavin, Belgenland, Southampton, 3 cs.
H. Reeve Angel & Co., Inc., Drottningholm, Gothenburg, 399 rolls.
Wilkinson Bros. & Co., Inc., by same, 91 bls.
Brooklyn Standard Bag Company, by same, 455 rolls.
A. E. MacAdam & Co., by same, 599 rolls.
A. E. MacAdam & Co., by same, 37 bls.
S. Baum, by same, 44 bls.
The Borregaard Company, by same, 400 bls.
Arkell Safety Bag Company, by same, 23 bls.
Arkell Safety Bag Company, by same, 290 rolls.
D. S. Walton & Co., by same, 1,487 rolls.
Melby Kuttroff & Company, by same, 28 rolls.
R. E. Thibout, LaSavoie, Havre, 4 cs.
Hermann Lips, by same, 22 cs.
Le Carrlo Frank, by same, 32 bls.
Ernstein & Co., Paris, Havre, 10 cs.
Schneider Bros., by same, 2 cs.
Du Pont Cellophone Company, by same, 41 cs.
F. J. Emmerick, Missouri, Havre, 26 cs.
J. R. Limermore, Inc., Conte Rosso, Geneva, 16 cs.

RAGS, BAGGINGS, ETC.

Castle & Overton, Athenia, Liverpool, 118 bls. bagging.
Castle & Overton, Niagara, Havre, 99 bls. bagging.
Castle & Overton, by same, 288 bls. waste paper.
Castle & Overton, by same, 726 bls. rags.
Castle & Overton, Missouri, Havre, 32 bls. rags.
Castle & Overton, Lexington, Dundee, 109 bls. paper stock.
M. O'Meara Company, by same, 22 bls. paper stock.
G. M. Graneo & Co., Lexington, Leith, 33 bls. rags.
Katzenstein & Keene, Inc., by same, 85 bls. bagging.
Katzenstein & Keene, Inc., Collamer, Havre, 77 bls. rags.
Katzenstein & Keene, Inc., Moncalieri, Marseilles, 46 bls. rags.
Katzenstein & Keene, Inc., Mt. Carroll, Hamburg, 201 bls. rags.
Katzenstein & Keene, Inc., by same, 45 bls. bagging.
E. J. Keller Company, Inc., by same, 36 bls. rags.
E. J. Keller Company, Inc., West Arrow, Antwerp, 290 bls. bagging.
E. J. Keller Company, Inc., Stromboli, Catania, 133 bls. rags.
E. J. Keller Company, Inc., Grootendyk, Rotterdam, 1,676 bls. rags.
E. J. Keller Company, Inc., by same, 100 bls. bagging.
Whatling Waste Products Company, by same, 48 bls. rags.
Goldman Sachs Company, by same, 214 bls. rags.
Guaranty Trust Company, by same, 119 bls. rags.
R. Blank, by same, 671 bls. rags.
A. W. Fenton, Inc., by same, 388 bls. rags.
Equitable Trust Company, by same, 99 bls. rags.
Paul Berlowitz, Innoko, Rotterdam, 319 bls. rags.
L. H. Abenheimer, by same, 285 bls. rags.
E. J. Keller Company, Inc., by same, 584 bls. rags.
E. J. Keller Company, Inc., by same, 557 bls. bagging.
W. Hughes Company, by same, 27 bls. cotton waste.
Waste Material Trading Corporation, Idaho, Hull, 126 bls. rags.
Mayer Brothers, Idaho, Antwerp, 189 bls. rags.
E. J. Keller Company, Inc., by same, 1,523 bls. rags.
E. J. Keller Company, Inc., by same, 231 bls. bagging.

OLD ROPE

Katzenstein & Keene, Inc., Grootendyk, Rotterdam, 68 coils.
Brown Brothers & Co., by same, 142 coils.
E. J. Keller Company, Inc., by same, 29 coils.
Wilkinson Brothers & Co., Inc., Kof. Maru, Genoa, 166 coils.

WOOD PULP

Kelly & Company, Inc., Trolleholm, Gothenburg, 750 bls. sulphite pulp.
Johaneson, Wales & Sparre, Inc., Drottningholm, Gothenburg, 1050 bls. sulphite pulp.
Johaneson, Wales & Sparre, Inc., by same, 150 bls. sulphite. pulp.
E. M. Sergeant & Co., by same, 762 bls. sulphite pulp.
E. M. Sergeant & Co., by same, 150 bls. dry soda pulp.
Nilsen Lyon & Co., Tyrifjord, Kristiania, 400 bls. wood pulp.
Guaranty Trust Company, by same, 15,000 bls. wood pulp.
J. Andersen Company, by same, 300 bls. wood pulp.
Tidewater Papermills Company, Barnhelm, Liverpool, N. S., 12,325 bls. wood pulp.
Castle & Overton, Innoko, Rotterdam, 396 bls. wood pulp, 87 tons.
Hartig Pulp Company, Inc., by same, 525 bls. wood pulp, 115 tons.

WOOD FLOUR

B. L. Soberski, Innoko, Rotterdam, 1,500 bags, 75,000 kilos.

CASEIN

T. M. Duche Sons, Halesius, Buenos Aires, 284 bags.
International Acceptance Bank, Storm King, Buenos Aires, 417 bags, 25,020 kilos.
West Virginia Pulp & Paper Company, by same, 417 bags, 25,020 kilos.
West Virginia Pulp & Paper Company, American Legion, Buenos Aires, 417 bags, 25,020 kilos.
Kalbfleisch Corporation, by same, 2,084 bags.
Atterbury Brothers, Inc., by same, 1,251 bags.

PHILADELPHIA IMPORTS

WEEK ENDING MARCH 29, 1924

D. S. Walton & Co., Trolleholm, Gothenburg, 65 rolls paper.
Atlantic Paper Company, by same, 20 bls. paper.
Quaker City Paper Company, by same, 22 bls. paper.
D. L. Ward Company, by same, 88 bls. paper.
D. L. Ward Company, by same, 32 rolls paper.
Whiting & Patterson, Inc., by same, 174 rolls paper.
Whiting & Patterson, Inc., by same, 7 bdls. paper.
Whiting & Patterson, Inc., by same, 11 bls. paper.
Wilkinson Brothers & Co., Inc., by same, 43 bls. paper.
Wilkinson Brothers & Co., Inc., by same, 482 rolls paper.
Republic Bag & Paper Company, Innoko, Rotterdam, 73 rolls paper.
Republic Bag & Paper Company, by same, 816 bls. packing paper.
Johaneson Wales & Sparre, Inc., Mexicano, Christiania, 115 bls. ground wood.
Scandinavian Pulp Agency, Inc., by same, 102 bls. sulphite pulp.
E. J. Keller Company, Inc., Innoko, Rotterdam, 499 bls. wood pulp, 106 tons.
D. J. Murphy, by same, 1,344 bls. rags.
Ropex Company, by same, 5 bls. rags.
E. J. Keller Company, Inc., by same, 149 bls. rags.
Castle & Overton, by same, 1,009 bls. rags.
Castle & Overton, Burgerdyk, Rotterdam, 853 bls. rags.
Castle & Overton, Liberty, Havre, 60 bls. rags.
Castle & Overton, Sagoparack, London, 253 bls. rags.
Castle & Overton, by same, 769 bls. waste paper.
Castle & Overton, Manchester Port, Manchester, 222 bls. waste paper.
Castle & Overton, by same, 725 bls. rags.
Katzenstein & Keene, Inc., by same, 100 bls. new cuttings.
Katzenstein & Keene, Inc., Burgerdyk, Rotterdam, 46 bls. bagging.
Katzenstein & Keene, Inc., by same, 61 bls. rags.
Katzenstein & Keene, Inc., Capulin, London, 46 bls. rags.
Katenstein & Keene, Inc., Niagara, Havre, 240 bls rags.
Old Colony Trust Company, Trolleholm, Gothenburg, 100 bls. paper stock.

(Continued on page 94)

Their Banker urged the Directors to buy it

Send for monograph "Property Records—Their Effect on Profit and Loss"

because without it neither he, nor anyone else, could read their earnings statement accurately

THEIR balance sheets showed consistent and good profits over a term of years, but their banker wasn't impressed.

He pointed out that property dollars were just as important as currency dollars in determining earnings—and that proper accounting for plant improvements, maintenance, and depreciation is as necessary in determining the net profit as proper accounting for currency dollars.

When he learned that their books of account and their keepers depended entirely on personal judgment and instructions in taking care of these items he urged the necessity for providing supporting data for the plant accounts—An American Appraisal.

American Appraisal Service is now an indispensable basis for the continuance of their plant accounts.

With its aid they have set up accurate depreciation standards—instead of depreciating extravagantly in good years and inadequately in poor years.

With its help they have also established control of the plant accounts, giving proper effect to improvements, replacements, and expense charges.

Their earnings statement can now be read with confidence by anyone because property dollars are accounted for with the same attention to reality as currency dollars.

Send for monograph U-4, "Property Records—Their Effect on Profit and Loss."

THE AMERICAN APPRAISAL COMPANY · MILWAUKEE

Atlanta, Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Indianapolis, Los Angeles, Milwaukee, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis, Seattle, Syracuse, Washington. The Canadian Appraisal Company, Ltd., Montreal, Toronto.

INVESTIGATIONS VALUATIONS, REPORTS — INDUSTRIALS, PUBLIC UTILITIES, NATURAL RESOURCES

An American Appraisal

THE AUTHORITY

© 1924, The A. A. Co.

Imports and Exports of Paper and Paper Stock

(*Continued from page 92*)

Katzenstein & Keene, Inc., Collamer, Havre, 164 bls. rags.
E. J. Keller Company, Inc., by same, 97 bls. rags.
D. J. Murphy, by same, 152 bls. rags.
A. Brown & Sons, Collamer, Dunkirk, 214 bls. rags.
Waste Material Trading Company, by same, 95 bls. rags.
New York Trust Company, W. Elcasco, Genoa, 20 bls. rags.
Katzenstein & Keene, Inc., by same, 20 bls. rags.
New York Trust Company, Lexington, Leith, 119 bls. rags.
E. J. Keller Company, Inc., Olen, Bordeaux, 32 bls. rags.
E. J. Keller Company, Inc., Olen, Havre, 138 bls. rags.
E. J. Keller Company, Inc., Liberty, Havre, 65 bls. rags.
E. J. Keller Company, Inc., Manchester Port, Manchester, 113 bls. rags.
Schultz & Ruckgaber, Devonian, Liverpool, 79 coils old rope.
West Jersey Paper Manufacturing Company, by same, 67 coils old rope.
True & McClelland, Collamer, Havre, 34 rolls old rope.
Waste Material Trading Corporation, W. Elcasco, Genoa, 79 coils old rope.

BOSTON IMPORTS

WEEK ENDING MARCH 29, 1924

PAPER

Coy Disbrow & Co., Inc., Trolleholm, Gothenburg, 22 bls. paper.

WOOD PULP

Scandinavian Pulp Agency, Inc., Trolleholm, Gothenburg, 1,778 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., 2,921 bls. Kraft pulp.
The Borregaard Company, by same, 100 bls. chemical pulp.

PAPER STOCK

International Purchasing Company, Barrymore, Liverpool, 137 coils manila rope.
True & McClelland, by same, 30 bls. paper stock.
Geo. M. Graves Company, Rexmore, Liverpool, 23 bls. rags.
Crocker Burbank & Co., Capulin, London, 315 lbs. waste paper.
Crocker Burbank & Co., by same, 465 bls. waste paper.
Train Smith Company, Vasconia, London, 160 lbs. rags.
Geo. M. Graves & Co., by same, 270 lbs. waste paper.
Geo. M. Graves & Co., Virgilea, London, 273 lbs. old rags and 34 bls. new cuttings.
Train Smith & Co., by same, 93 bls. waste paper.
Katzenstein & Keene, Inc., Morian, Liverpool, 125 bls. new cuttings.

BALTIMORE IMPORTS

WEEK ENDING MARCH 29, 1924

D. S. Walton & Co., Trolleholm, Gothenburg, 158 bdls. paper.
Melby Kuttroff & Co., Inc., by same, 28 bls. paper.
Wilkinson Bros. & Co., Inc., by same, 95 bls. paper.
Lagerloef Trading Co., Carlsholm, 3,261 bls., 591 tons wood pulp.
Johaneson, Wales & Sparre, Inc., Carlsholm, Gothenburg, 2,000 bls. sulphite pulp.
Nilsen Lyen & Co., Inc., by same, 510 bls. mechanical pulp, 76 tons.
Scandinavian Pulp Agency, Inc., by same, 3,683 bls. Kraft pulp, 736 tons.
Scandinavian Pulp Agency, Inc., by same, 3,302 bls. sulphite pulp, 660 tons.
Johaneson, Wales & Sparre, Inc., by same, 1,625 bls. sulphite pulp, 330 tons.
Parsons & Whittemore, by same, 4,000 lbs. sulphite pulp, 500 tons.
Kelly & Co., Inc., by same, 804 lbs. sulphite pulp, 152 tons.
E. J. Keller Company, Inc., Hannover, Trondhjem, 1,500 lbs. wood pulp.
E. J. Keller Company, Inc., Emden, Hamburg, 301 lbs. wood pulp.
E. J. Keller Company, Inc., by same, 572 lbs. rag pulp.
E. J. Keller Company, Inc., by same, 40 bls. rags.
Katzenstein & Keene, Inc., Lexington, Leith, 209 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING MARCH 29, 1924

Katzenstein & Keene, Inc., Saugerties, Barcelona, 410 bls. bagging.
Castle & Overton, Niagara, Havre, 233 bls. rags.
Castle & Overton, West Durfee, London, 174 bls. waste paper.

IN TRANSIT TO MONTREAL, CANADA.

W. Brodie, Innoko, Rotterdam, 1,000 bls. wood flour, 50,375 kilos.

VIEW OF PHILADELPHIA'S TRADE

(*Continued from page 70*)

who will cover the textile industry. The Universal Company has just added a line of Fourdrinier Tissues.

Removal of the George T. Johnson Company from its former offices in the West End Trust Building to the newly erected Fox Building has just been completed. The local offices under the direction of S. S. Gardner will be located in Room 604, where the fine paper sales division for this territory are conducted.

Among the visitors to the trade during the week were Adam Lindsay, representing the Miami Pulp and Paper Company, of West Carrollton, Ohio; W. H. Miller of the Heeny Biglow Wire Company, Springfield, Mass.; and Vice-president James M. Miller of the Reading Paper Mills, of Reading, Pa.

Announcement was made during the week of the appointment of Leonard Mann, to the position of General Manager of the Analomink Mills of North Water Gap, Pa., manufacturers of textile papers.

G. A. Keeny of the Arrowhead Mills of Fulton, New York, was a trade visitor in Philadelphia stopping over here on his way South.

President J. Stogdell Stokes of the Stokes & Smith Company, manufacturers of paper machinery and box making equipment, accompanied by Mrs. Stokes, is on an eight day tour through the West Indies and Bermuda.

Byrant Paper Co., Installs Second Well

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., March 31, 1924.—The Kelly Well Company has completed the installation of its second well for the Bryant Paper Company and it is today flowing at the rate of nearly 800 gallons a minute. The well is 129 feet deep and there is a steady supply of 80 feet of water in the concrete chamber. The water supply is taken from a strata below that of any yet touched by the Bryant concern.

Forest Research Council

The Northeastern Forest Research Council is meeting today at Amherst, Mass. R. S. Kellogg, secretary of the News Print Service Bureau, is in attendance. The following gentlemen have been named by Secretary of Agriculture Wallace to assist in an advisory capacity in the work of the Council:

W. R. Brown, president, New Hampshire Timberland Owners' Association, chairman, New Hampshire Forestry Commission, Berlin, N. H.

P. S. Collier, secretary, Northeastern Retail Lumber Dealers' Association, Rochester, N. Y.

S. T. Dana, director, Northeastern Forest Experiment Station, Amherst, Mass.

R. T. Fisher, director, Harvard Forest, Petersham, Mass.

J. H. Foster, State Forester, Concord, N. H.

R. S. Hosmer, Department of Forestry, N. Y. State College of Agriculture, Ithaca, New York.

C. H. Keith, president, New England Box Company, Greenfield, Mass.

R. S. Kellogg, secretary, News Print Service Bureau, New York, N. Y.

J. C. Kendall, director, N. H. Agricultural Experiment Station and Extension Service, Durham, N. H.

Franklin Moon, Dean, N. Y. State College of Forestry, Syracuse, N. Y.

H. C. Philbrook, president, Vermont Timberland Owners' Association, Boston, Mass.

G. W. Sisson, Jr., president, Racquette River Paper Company, Potsdam, N. Y.

W. L. Slate, director, Connecticut Agricultural Experiment Station, New Haven, Conn.

J. W. Toumey, Yale School of Forestry, New Haven, Conn.

F. A. Waugh, division of Horticulture, Massachusetts Agricultural College, Amherst, Mass.

New York Office
280 Broadway

Dayton Office

Chicago Office
10 So. La Salle St.

Compare it
Tear it
Test it
and you will specify it

HOWARD BOND

WATERMARKED

"The Nation's Business Paper"

Made by

THE HOWARD PAPER CO. URBANA, OHIO

Howard Laid Bond
Howard Ledger
Howard Bond
Envelopes

The B Co. INC.

QUALITY PULPS

"HAFSLUND BEAR"
Bleached Sulphite

"FORSHAGA"
Bleached Sulphite

"HURUM SPECIAL"
Extra Strong Kraft

ORWAY SPECIAL

KOOS BAC

"BAMBLE"
Extra Strong Kraft

The Borregaard Company
Incorporated
200 FIFTH AVENUE NEW YORK, N. Y.

KVP

Papers:

Genuine Vegetable Parchment
For wrapping all moist and greasy foodstuffs.

Bread Wraps—Waxed Papers
For tight-sealing cartons and wrapping dry foods.

Bond and Ledger Papers
All standard sizes, weights and colors.

Handy Household Papers in Rolls
Ask and ye shall receive full information.

KALAMAZOO VEGETABLE PARCHMENT CO.
Manufacturers of
PARCHMENT, WAXED and BOND PAPERS

KALAMAZOO, MICHIGAN

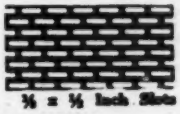
Perforated Metal Screens

For Pulp and Paper Mills

STEEL, COPPER, BRASS, BRONZE and other Alloys

punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.

.085 Inch Round



⅛ x ½ Inch Slots

CHARLES MUNDT & SONS
85-86 FAIRMONT AVE. JERSEY CITY, N. J.

STOKERS

Builders of Mechanical Stokers for 35 years
Sales and Service Offices in All Principal Cities
Address Nearest Office
Westinghouse Electric & Mfg. Co.
So. Philadelphia Works, Philadelphia, Pa.

W WESTINGHOUSE ELECTRIC

Westinghouse

Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd.	60½	61
Abitibi Power and Paper Company, Ltd, Pfd.	100½	104
American Writing Paper Company, Pfd.	1½	2½
Brompton Pulp and Paper Company, Ltd.	39	39⅛
Donnacona Paper Company, Ltd.	245	255
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	36½	37
International Paper Company, Pfd.	63	65
Laurentide Company, Ltd.	88¼	89
Price Brothers	40	41
St. Maurice Paper Co., Ltd.	94	95
Smith (Howard) Paper Mills, Ltd.	62	65
Spanish River Pulp and Paper Mills, Ltd.	105	105¼
Spanish River Pulp and Paper Mills, Pfd.	113	113⅛
Union Bag and Paper Corp.	52	53
Wayagamack Pulp and Paper Company, Ltd.	38	40
West Virginia Pulp and Paper Company	53½	55

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934..	99	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940..	92	95
Abitibi Power and Paper Company, Ltd., Con. 8s 1931..	102½	103½
Belgo Canadian Paper Company, 1st 6s 1943.	92½	93¼
Brown Company Serial 6s.	97	98
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944.	93	95
Donnacona Paper Company, Ltd., 1st 6s 1940.	97	98½
Eddy Paper Company, 1st 7½s 1931.	97½	99½
Gair (Robert) Company, 1st 7s 1937.	97	98
International Paper Company, 1st and Ref. 5s (Series "B") 1947	83	83½
Mattagami Pulp and Paper Company, 1st 6s 1937.	60	63
Mattagami Pulp and Paper Company, 1st 7s 1949.	20	25
Oswego Falls Corporation, 1st 8s 1942.	100¾	101¾
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	97	100
Parker, Young Company, 1st 6½s 1944.	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	97	98
Peshtigo Paper Company, 1st 7s (Series "B") 1942.	92	94½
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943.	96	97¼
Provincial Paper Mills, Ltd., 1st 6s 1940.	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929..	18	24
Riordon Pulp and Paper Company, Ltd., 6s 1942.	71½	73
Riordon Company, Ltd., 1st and Ref. 8s 1940.	67	68½
River Raisin Paper Company, 1st 8s 1936.	103½	105
Smith (Howard) Paper Mills, Ltd., 6s 1934.	99¾	101
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941..	93	97
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931..	99	100
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	102¾	103¾
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—f. o. b. Mill—		
Rolls, contract	3.75	@ 4.00
Rolls, transit	3.75	@ 4.25
Sheets	4.25	@ 4.50
Side Runs	3.50	@ 4.15
Book, Cased—f. o. b. Mill—		
S. & S. C.	7.25	@ 9.00
M. F.	7.10	@ 8.85
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—f. o. b. Mill—		
White No. 1	.75	@ .76
White No. 2	.70	@ .80
Colored	1.05	@ 1.90
Anti-Tarnish	1.35	@ 1.90
Kraft	.85	@ 1.10
Manila	.75	@ .80
Kraft—f. o. b. Mill—		
No. 1 Domestic	5.85	@ 6.20
No. 2 Domestic	5.15	@ 5.75
Imported	4.75	@ 5.20
Manila—		
No. 1 Jute	7.50	@ 9.00
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	4.25	@ 4.75
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	5.00	@ 5.25
Common Bogus	3.50	@ —
S. Screening	3.25	@ 3.75
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	55.00	@60.00
Straw	61.00	@63.00
Chip	50.00	@55.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	65.00	@75.00
Wood Pulp	70.00	@75.00
Container	70.00	@80.00
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)		
No. 1 Imported	29.00	@34.00
(F. o. b. Mill)		
No. 1 Domestic	29.00	@34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)		
Sulphite (Imported)—		
Bleached	3.90	@ 4.50
Easy Bleaching	2.75	@ 3.00
No. 1 strong unbleached	3.05	@ 3.15
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.75	@ 3.05
Sulphate—		
Bleached	3.90	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.90	@ 4.50
Easy Bleaching Sulphite	2.90	@ 3.05
News Sulphite	2.50	@ 2.80
Mitscherlich	2.90	@ 3.00
Kraft (Domestic)	2.65	@ 2.90
Soda Bleached	4.00	@ 4.20

Domestic Rags

New Prices to Mill, f. o. b. N. Y.		
Shirt Cuttings—		
New White, No. 1	13.00	@13.50
New White, No. 2	6.25	@ 6.75
Silesias, No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	5.26	@ 6.15
Fancy	6.25	@ 6.75
Blue Overall	7.15	@ 8.15
New Blue	5.00	@ 5.50
New Black Soft	4.65	@ 5.15
New Light Seconds	2.75	@ 3.00
O. D. Khaki Cuttings	4.04	@ 4.15
Men's Corduroy	3.65	@ 4.00
New Canvas	6.40	@ 7.00
New Black Mixed	2.50	@ 2.75
White, No. 1—		
Repacked	6.25	@ 6.75
Miscellaneous	5.50	@ 5.75
White, No. 2—		
Repacked	4.00	@ 4.25
Miscellaneous	3.50	@ 3.65
St. Soiled, White	2.80	@ 3.00
Thirds and Blues—		
Repacked	3.00	@ 3.25
Miscellaneous	2.35	@ 2.45
Black Stockings	3.00	@ 3.25
Roofing Rags—		
Cloth Strippings	2.30	@ 2.40
No. 1	2.05	@ 2.15
No. 2	1.25	@ 1.35
No. 3	1.20	@ 1.30
No. 4	1.20	@ 1.30
No. 5A	1.50	@ 1.60

Foreign Rags

New Light Silesias	7.00	@ 7.75
Light Flannelettes	8.00	@ 8.25
Unbl'chd Cottons	9.00	@ 9.50
New White Cuttings	10.00	@11.50
New Light Oxfords	7.25	@ 7.75
New Light Prints	6.75	@ 7.25
New Mixed Cuttings	2.50	@ 2.75
New Dark Cuttings	2.00	@ 2.25
No. 1 White Linens	9.00	@10.00
No. 2 White Linens	7.00	@ 8.00
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.00	@ 5.00
Old Extra Light Prints	3.15	@ 3.25
Ord. Light Prints	2.75	@ 3.00
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cotton	3.25	@ 3.50
German Blue Cottons	3.00	@ 3.20
Ger. Blue Linens	3.00	@ 3.25
Checks and Blues	2.00	@ 2.15
Dark Cottons	2.00	@ 2.10
Shoppery	1.75	@ 1.85
French Blues	3.25	@ 3.50

Bagging

Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.30	@ 1.40
Domestic	1.20	@ 1.30
Wool, Tares, light	1.30	@ 1.40
Wool, Tares, heavy	1.40	@ 1.50
Bright Bagging	1.10	@ 1.20
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut	2.15	@ 2.25
Hessian Juts Threads—		
Foreign	2.00	@ 2.25
Domestic	2.00	@ 2.10

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.30	@ .38
No. 2	.29	@ .31
No. 3	.34	@ .36
India, No. 6 basis—		
Light	.17	@ .18
Dark	.16	@ .17
B. C., 18 basis	.41	@ .42
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.29	@ .30
Light, 18 basis	.26	@ .27
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.19	@ .21
4-ply	.20	@ .22
3-ply	.20	@ .22
Unfinished India—		
Basis	.16	@ .17
Paper Makers' Twine Balls	.09	@ .11
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.15	@ .16
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	4.10	@ 4.15
Hard, White, No. 2	3.20	@ 3.30
Soft, White, No. 1	3.10	@ 3.30
Flat Stock—		
Stitches	1.70	@ 1.80
Over Issue Mag.	1.70	@ 1.80
Solid Flat Book	1.50	@ 1.60
Crumbled No. 1	1.25	@ 1.35
Solid Book Ledger	2.15	@ 2.25
Ledger Stock	1.90	@ 2.05
New B. B. Chips	.65	@ .80
Manilas—		
New Env. Cut	2.45	@ 2.55
New Cut No. 1	1.75	@ 2.00
Extra No. 1 old	1.30	@ 1.40
Print	1.10	@ 1.25
Container Board	.90	@ 1.00
Bogus Wrapper	.90	@ 1.00
Old Krafts Machine compressed bales	2.15	@ 2.25
News—		
No. 1 White News	2.15	@ 2.25
Strictly Overissue	1.15	@ 1.25
Strictly Folded	.85	@ .95
No. 1 Mixed Paper	.60	@ .70
Common Paper	.50	@ .60

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper

F. o. b. Mill		
All Rag Bond	35	@ 40
No. 1 Rag Bond	30	@ 35
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9	@ 12
Sulphite Bond	7½	@ 10¾
Sulphite Ledger	9½	@ 12
Superfine Writing	18	@ 24
No. 1 Fine Writing	14	@ 18
No. 2 Fine Writing	12	@ 14
No. 3 Fine Writing	9	@ 12
No. 1 M. F. Book	5¾	@ 7½
No. 1 S. & S. C. Book	6¼	@ 7¾
Coated Book	8	@ 10
Coated Label	8	@ 10
News—Rolls, mill	3¾	@ 4½
News—Sheets, mill	4	@ 4¾
No. 1 Manila	5	@ 6
No. 1 Fibre	5¼	@ 5¾
No. 2 Manila	4¾	@ 5
Butchers' Manila	4½	@
No. 1 Kraft	5½	@ 6½
No. 2 Kraft	5	@ 6
Wood Tag Boards	4½	@ 6
Screenings	2¾	@ 3
Boards, per ton—		
Plain Chip	$47.50	@50.00
Solid news	50.00	@52.50
Manila Line Chip	57.50	@60.00
Container Lined—		
85 Test	65.00	@70.00
100 Test	70.00	@75.00

Old Papers

F. o. b. Chicago

Shavings—		
No. 1 Hard White	3.25	@ 3.35
No. 1 Soft Shav.	2.75	@ 2.85
No. 1 Mixed	1.25	@ 1.35
No. 2 Mixed	1.15	@ 1.25
White Envel. Cuttings	3.40	@ 3.50
Ledgers and Writings	1.65	@ 1.75
Solid Books	1.50	@ 1.55
No. 1 Books, Light	1.40	@ 1.50

Blanks	2.25	@	2.35
Ex. No. 1 Manila	2.35	@	2.45
Manila Envelope Cuttings	2.45	@	2.50
No. 1 Manilas	1.25	@	1.30
Folded News (over issue)	1.20	@	1.25
Old Newspapers—			
No. 1	1.05	@	1.10
No. 2	.90	@	.95
Mixed Papers—			
No. 1	.75	@	.80
No. 2	.70	@	.75
Straw Clippings	.90	@	1.00
Binders' Clippings	1.10	@	—
Kraft	2.20	@	2.30
New Kraft Cuts	2.50	@	—
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	43.00	@	—
No. 2	41.00	@	—
No. 3	39.00	@	—
No. 4	38.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper

Bonds	.09½	@	.53
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.09¾	@	.12¾
Book, S. S. & C.	.11	@	.15
Book, Coated	.14½	@	.20
Coated Lithograph.	.10	@	.15
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.03½	@	.04
Straw Board	65.00	@	70.00
News Board	60.00	@	65.00
Chip Board	55.00	@	60.00
Wood Pulp Board, 2.75 (Carload Lots)		@	3.00
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.45	@	—
Domestic	1.50	@	—
Manila Rope	6.00	@	6.50
Sisal Rope	1.25	@	—
Mixed Rope	1.30	@	—
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.30	@	—
No. 1, New Lt. Burlap	2.00	@	—
New Burlap Cuttings	2.00	@	2.25

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	4.25	@	4.40
No. 2, Hard White	3.50	@	3.75
No. 1 Soft White	3.25	@	3.50
No. 2 Soft White	2.15	@	2.25
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.25	@	2.50
Writing Paper	2.00	@	2.25
No. 1 Books, heavy	2.00	@	2.25
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.75	@	3.00
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.25	@	1.50
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.90	@	1.00
No. 1 Mixed Paper	1.00	@	1.10
Common Paper	.80	@	.90
Straw Board, Chip	1.00	@	1.10
Binders Bd., Chip.	1.00	@	1.10

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13	@	—
New White, No. 2	.07	@	—
Silesias, No. 1	.08¼	@	.08½
New Unbleached.	.11	@	.11½
Washable	.05	@	.05½
Fancy	.06½	@	.06¾
Cottons—according to grades—			
Blue Overall	.08¾	@	.09
New Blue	.03¾	@	.04
New Black Soft.	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11
New Black Mixed	.05¼	@	.05½
Old White, No. 1—			
Repacked	3.75	@	3.75
Miscellaneous	.05½	@	.05¾
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous	.04¾	@	—
Thirds and Blues—			
Repacked	3.75	@	—
Miscellaneous	3.25	@	—
Black Stockings	4.25	@	4.75
Roofing Stock—			
No. 1	2.35	@	2.45
No. 2	2.15	@	2.25
No. 3	2.05	@	2.15
No. 4	2.05	@	2.15
No. 5A	1.75	@	—
B			nominal
C			nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08½	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.07¼	@	.09½
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.00	@	4.50
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	40.00	@	45.00
News, Vat Lined	40.00	@	47.50
Wood, Vat Lined	50.00	@	52.50
Filled News Board	40.00	@	47.50
Solid News Board, No. 4 Finish	60.00	@	—
S. Manila Chip	60.00	@	65.00
Pat. Coated News	77.50	@	87.50

Old Papers

Mixed paper	.55	@	.57½
Folded news	.65	@	.70
Soft white shavings	2.75	@	2.90
Hard white shavings	3.60	@	4.00
Kraft paper	2.00	@	2.10
Ledger and letter	2.15	@	2.35
No. 1 books and magazines	1.50	@	1.70
Manila paper No. 1	1.70	@	1.75
Solid ledgers	2.50	@	2.75
No. 1 roofing rags	2.20	@	2.25
No. 2 roofing rags.	2.10	@	2.20
No. 3 gunny bagging	.90	@	1.05
No. 4 Brussels and hard back carpets.	1.30	@	1.40
No. 5 roofing rags			
A's	1.50	@	1.60
B's	—	@	—
C's	—	@	—
No. 6 City dump rags	—	@	—
Manila rope, domestic	.06	@	.06½
Mixed strings	1.15	@	1.25
Jute strings	1.30	@	1.40

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rap	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	34.00	@	36.00
Sulphite easy bleaching	55.00	@	60.00
Sulphite news grade	52.50	@	55.00
Sulphite, bleached	75.00	@	80.00
Sulphite	60.00	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut.	4.00	@	—
Soft White Book shavings	3.20	@	3.30
White Blk. News	2.15	@	2.20
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.35	@	—
Light and Crumpled Book Stock	1.20	@	—
Ledgers and Writings	1.85	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut.	—	@	2.00
Printed Manilas.	1.55	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News	.90	@	—
No. 1 Mixed Papers	—	@	.75
Domestic Rags—			
Price to mills, f. o. b. Toronto Per lb.			
No. 1 White shirt cuttings	.12¼	@	.13
No. 2 White shirt cuttings	.06½	@	.07
Fancy shirt cuttings	.06¼	@	.06½
No. 1 Old Whites		@	
Third and blues.	.03¼	@	.03½
Per cwt.			
Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06¼	@	.06½
No. 2	1.55	@	—

To Discontinue Taking News Print Samples

WASHINGTON, D. C.—Customs collectors have been instructed to admit free of duty as standard news print paper without taking samples paper produced in Canadian mills where it has been found that none of the news print contained in excess of 30 per cent of sulphite. Investigation by the department disclosed that the sulphite used by the Canadian mills ranged from 22.9 per cent to 27 per cent. but all the records showed that less than 30 per cent of sulphite was used.

Investigation of standard news print paper shipments at Board of Ports in order to sample consignments for sulphite content to determine whether the merchandise was admissible duty free had resulted in a number of delays and in some instances the spoiling of print paper through exposure to the elements. Survey of sulphite contents at the manufacturing plant was undertaken by the Treasury as a means of eliminating inconvenience and loss at entrance ports.

"Inasmuch," the Treasury stated, "as sulphite is much more valuable than mechanically ground wood pulp, it is obvious that the paper mills will not use more sulphite than is necessary to make a paper which will be accepted by newspapers as a good delivery under their contracts."

Wisconsin News Notes

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., March 24, 1924.—D. W. Bergstrom, Sr., prominent Neenah paper manufacturer, has offered to build a splendid chapel at Oakhill cemetery, Neenah, and donate it to the city. Architects are planning a beautiful structure which probably will be erected during the summer. Oakhill cemetery, with completion of the chapel, will be among the most beautiful in the state.

A daughter was born last week at Chicago to Mr. and Mrs. Judson G. Rosebush, Appleton. Mr. Rosebush is president of the Patten Paper Company, Appleton, and general manager of the Northern Paper Mills, Green Bay. They now have two children.

F. J. Sensenbrenner, of the Kimberley-Clark Company, has accepted appointment as a member of the board of advisors of Marquette University, Milwaukee.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, APRIL 2, 1924.

While the market has shown some signs of continuing the general movement toward betterment that set in some time ago, there has been little change in the general situation so far as prices are concerned. Things have been very stable on the whole, and there is every reason to believe that the demand is going to keep on improving.

Most of the mills are running full time now in all of the various branches of the industry with two or three exceptions, and so far as internal conditions are concerned things were never on a firmer basis. The problem of importations is still worrying many of the domestic manufacturers, but this problem appears to be working itself out, and both importers and domestic men are fighting to keep any irregularities out of the situation.

So far as general good business is concerned, news print continues to lead the market. There is a good and a growing demand, and statistics show that more of this product is being used this year than ever before. In fact, every person in the United States is now averaging better than fifty pounds in yearly consumption.

Book paper is also continuing to improve. It has had its setbacks, but now appears to be well on the road to general prosperity. The manufacturers report almost all of the mills are running at full time, and dealers say that they are doing a satisfactory amount of business. This does not mean that there is not room for still more improvement, but there seems to be every reason to suppose that from now until summer business in book is going to continue at normal or better.

Fine papers are also moving fairly well and manufacturers say that they have every reason to believe that they will continue to do so. These papers always appear to be in pretty steady demand anyway, and so far as can be seen they are going to continue so for the next few weeks at any rate.

Kraft and the other coarse papers appear to be in fairly good shape considering the vicissitudes of the past few months, there is a good and a growing demand reported for most of the grades and prices remain just about the same. The same situation exists in the tissue market. Apparently there is less over production there at the present time and, of course, this is always one of the troubles of the tissue manufacturers and dealers.

Board is also jogging along at just about the same rate of speed with no real changes in either the one direction or the other. This branch of the paper trade always has its ups and downs, but it appears to have had less of them recently. It is reported that the board men are planning to join with an organization which will tend to stabilize them somewhat and bring about greater cooperation than they have ever been able to achieve before.

Mechanical Pulp

The price of mechanical pulp has not undergone any real change during the past week. There appears to be less uncertainty among dealers and manufacturers of this product which would indicate that the demand is fairly firm. There is nothing to show that there are any radical changes of any kind due to occur in ground wood.

Chemical Pulp

Sulphite is in somewhat better demand this week than it was a short time ago, and buyers are showing more interest. This was to be expected since it was fairly certain that the surplus supplies which held the market back for a long time have now been pretty well used up. The other pulps, too, are doing well. This may be due to the fact that a number of elements are contributing to the cutting down of foreign competition at this particular time. Norway and Sweden always do less shipping in the winter when their ports are almost all closed up with ice and the ships tied up at the wharves. Added to this was a strike in the former country which caused some loss to production.

Old Rope and Bagging

Old rope is still in quite good demand with the prices fairly regular and buying steadier than it has been. The same is true in bagging, particularly in some of the better grades. There is nothing to indicate that there is going to be any real change for the time being at any rate although the normal state of this market is such that it is difficult to tell what it is going to do from one week to the next.

Rags

Rags have been a little off, but they now seem to be showing signs of improvement. At both the top and the bottom the demand is improving. New rags have been in greater call and the roofing mills appear to be coming into the market with more strength. Prices have been subject to some minor fluctuations and in some instances have gone up. Dealers are satisfied with the situation, and say that they believe the present indications of betterment are going to develop a strong market in the near future.

Waste Paper

Waste paper is also holding up fairly well. There have been no changes that might be classed as radical, but a few of the commodities have gone up a little. Shavings are moving fairly well as are some of the better grades of news. The low grades have not quite kept up with the higher, but there is reason to believe that they will improve within a short time.

To Represent Northwest Paper Co.

The long-fiber unit of the new plant of The Northwest Paper Company at Cloquet, Minnesota, is now practically completed and commercial operations will soon start on the manufacture of high-grade wrappings.

The combination of a new process, modern equipment and the highest engineering development is producing a product which cannot help but make the most favorable impression on the jobbing and converting trade.

The efforts of the company have been directed toward a wrapping paper superior in color, finish and strength, to competitive wrappings, and the preliminary machine runs have demonstrated their entire success.

Linton & Co., 537 S. Dearborn street, Chicago, Ill., with branch offices in New York City, St. Paul, Minn., St. Louis and Kansas City, Mo., have been appointed exclusive sales representatives for this grade of paper, which will be placed on the market during April.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., April 2, 1924.—The Government Printing Office has received the following bid for 39,000 lbs. white machine finish book paper, 28 x 38—39. Dobler and Mudge, $.066 per lb.; Kalamazoo Paper Company, $.0725; Allied Paper Mills, $.07295; International Paper Company, $.0765; American Writing Paper Company, $.0835; Old Dominion Paper Company, $.07469; and $.0719; The Champion Fibre Company, $.0683 and $.0648; Perkins-Goodwin Company, $.0672.

Drawing Big Pulp Wood Loads

On the operation of Thomas Falls at Kashobowie in the Thunder Bay district of Ontario there have been some heavy loads of pulpwood drawn this spring. One of fifteen and a half cords of eight-foot sticks, piled on an eight-foot rack, twenty-six feet long, was recently hauled by horses for two and a half miles to the river bank.

The Home of Quality

FACTORY
132ND TO 133RD ST & BROOK AVE

PAPER BAGS and SACKS

GLASSINE BAGS—SPECIALTIES

Operating a Modern Printing Plant

SCHORSCH & CO.

Manufacturers *established 1901*

500 East 133d Street : New York

This Registered Trade Mark Octagon

on a Paper Bag Vouches for Its Good Quality

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856.

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Some portion of our clay production is *pulverized*. That part of it which is *pulverized* is, as far as we know, the only *pulverized clay* which is washed and refined before being pulverized.

This insures greater freedom from impurities and an exceedingly uniform product.

Prices on M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit samples and quote you

MECCO

THE MINER-EDGAR CO.
110 WILLIAM ST.,
NEW YORK

FOURDRINIER WIRES

Dandy Rolls, Cylinder Molds,
Steel, Brass and Bronze
Wire Cloth
Bank and Office Railings.

CHENEY BIGELOW WIRE WORKS
Established 1842
SPRINGFIELD MASS.

J. ANDERSEN & CO.

21 EAST 40th STREET, NEW YORK CITY

Importers of Chemical Pulps

BLEACHED and UNBLEACHED

Agents for Kellner Partington Paper Pulp Co., Ltd.
Sarpsborg, Norway; Forshaga, and Edsvalla, Sweden.
Kronstädter Papierstoff — Fabriks Actien — Gesellschaft
Mills at Tucinsky, Sv. Martin

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, April 2, 1924.

Following the several changes in the chemical market during the past few weeks there seems to be a tendency at present for things to remain at about the same level. The rise in prices indicates that the buyers are showing somewhat greater interest, but dealers say there is still room for a great deal of improvement. There is a great deal of activity in other industries using these same chemicals, and that has tended to keep prices and demand steady.

Everyone is agreed that the paper industry is not buying all of the raw materials that it should, and this hand-to-mouth buying on the part of some branches of the industry is cutting down excess supplies. When the paper manufacturers do come into the chemical market with strength again there is danger that the prices will take a decided rise. For the present, however, quotations remain the same.

BLEACHING POWDER.—Bleach is one of the commodities which has gone up in price. There seems to be a good demand for it outside of the paper industry and that is showing definite signs of interest now. The present quotation is from 1.90 to 2.05 cents a pound in large drums and from 2.15 to 2.25 cents in small.

CAUSTIC SODA.—Caustic has remained just about the same during the week without much change in either the one direction or the other. The demand is steady but is said to be a little smaller than it should be. The price is still 3.10 to 3.15 cents on a flat basis at the works.

CASEIN.—In opposition to some of the other articles on this market casein has been somewhat depressed during the week. The price instead of going up has gone off a little and buying still remains rather slow. It is now possible to get casein in New York at from 11 to 12 cents a pound.

CHINA CLAY.—Buying has not been quite so good in the china clay market during the past few weeks. While there has been no great falling off in demand there is a tendency on the part of paper men to hold off for a time. It may be that there are surplus supplies at the paper mills, and that it is merely a question of when these will be used up before the buying begins with some strength once more. The price remains at from $12 to $15 a ton on the domestic grades and about $16 to $20 on the imported.

CHLORINE.—Chlorine once more has taken an upward rise and dealers say that the demand is fairly good. There seems to be rather close competition for some of the lots that have been passing through the local market during the week. The price is now quoted at from 4.50 to 5.50 cents a pound in tanks.

ROSIN.—Rosin has fallen off a little in price and the paper manufacturers appear to have enough of it on hand to suit their immediate needs. The price in 280-pound barrels is now at about $5.75 to $5.85, which is a considerable falling off.

SALTCAKE.—Saltcake is moving along just about as it has all along. While the paper industry is not buying as much as might be expected this is never so serious as if the dealers and works had surplus lots of other chemicals on hand. While many of the others will not keep without loss it is comparatively simple to store saltcake. The price is from $20 to $23 a ton still with no signs of any change.

SODA ASH.—Ash is still about the same as it has been for some weeks past with no changes either in market condition or in price which remains at 1.38 cents a pound on a flat basis.

SULPHATE OF ALUMINA.—Alumina is still in about the same demand with a slight falling off in price on the low grades. Commercial is now selling at from 1.15 to 1.30 cents while iron free is quoted at from 2.10 to 2.25 cents a pound.

Recent Incorporations

GATES-BURNS PAPER PRODUCTS CORPORATION, Los Angeles, California. Capital, $200,000.

CORRUGATED PAPER BOX COMPANY, Detroit, Michigan. To manufacture paper boxes. Capital, $50,000. Incorporators: Kathryn F. and Charles G. Green, Detroit, and Harry R. Marien, Redford.

AMBASSADOR STATIONERS, Manhattan, New York, printers. Capital: $5,000. Incorporators: S. and F. J. Smith, J. F. Dolan. Attorney, J. A. Beha, 233 Broadway, New York.

WHIKAN CORPORATION, Wilmington, Delaware. To manufacture paper. Capital: $15,000. American Guarantee and Trust Company.

THE HENRY ROSE COMPANY, Boston, Massachusetts. To deal in cotton waste and paper stock. Capital: $50,000. Incorporators: Henry and Esther Rose and Sara Rosenberg, all of Boston.

HUNTINGTON PAPER BOX COMPANY, Huntington, Indiana. Capital, $25,000. Manufacturing. Directors: Wilfred J. Whitelock, E. Rex Lowey, R. Eugene Lowey.

SPECIALTY PAPER AND TWINE CORPORATION, Bronx, New York. Capital, $10,000. Incorporators, C. J. Pintel, I. Schlanger, I. H. Smith. Attorney, H. M. Goodman, 217 Broadway, New York.

STANDARD PAPER BOX MACHINERY COMPANY, Manhattan, New York. Capital, $15,000. Incorporators, L. and F. Schulman, J. Adams. Attorney, A. Rosenbluth, 233 Broadway, New York.

OBERLY & NEWELL, 540 Pearl street, Manhattan, New York, labels and sample cards. Capital, $96,000. Incorporators, F. D. Hearn, A. W. and F. H. Clapp. Attorney, W. G. Whittick, 258 Broadway, New York.

WESTERN PRESS, Manhattan, New York, magazines and newspapers. Capital, $5,000. Incorporators, L. F. Leahy, L. E. Inkeles, M. Siegel. Attorney, E. Lieberman, 366 Broadway, New York.

JOHN J. ESCHENBRENNER, Manhattan, New York, make paper. Capital, $10,000. Incorporators, J. J. and N. J. Eschenbrenner. Attorneys, Brennan, Flamman & Simpson, 44 Court street, Brooklyn.

PACIFIC PULP AND PAPER COMPANY, of Seattle, Washington. Capital, $1,250,000. Incorporators, C. L. Shuff, M. Wiese and A. J. Sherlock.

HARRIS SMITH, Buffalo, New York, paper making and printing. Capital, $10,000. Incorporators, P. and R. Harris, C. A. Smith. Attorney, M. Weimar, Buffalo.

MIDVALE PAPER BOARD COMPANY, Manhattan, New York. 1,000 shares preferred stock $100 each, 5,000 common no par value. Incorporators, G. V. Reilly, R. K. Thistle, S. C. Wood. Attorneys, White & Case, 14 Wall street, New York.

BLAKE & HIGGINS COMPANY, INC., Vermont. To manufacture paper and kindred articles and to acquire a mill, factory or plant for the purpose. Capital, $300,000. Incorporators, Herbert G. Barber, Brattleboro; Clarence Whittier, Montpelier; Frank E. Barber and C. Menzies Miller.

PAPER MANUFACTURERS EDUCATIONAL ASSOCIATION, Manhattan, New York, rag paper trade, 300 shares common stock, no par value. Incorporators, S. W. Dow, G. Donovan, F. G. Hoyt.

RISING STAR PAPER BOX COMPANY, Manhattan, New York, capital, $100,000. Incorporators, T. Thorner, J. and S. Siegel. Attorney, L. Diamant, 334 5th avenue.

Plainfield Paper Co. to File Stock

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., March 31, 1924.—The Michigan Securities commission has accepted for filing the stock of the Plainfield Paper Company, Childsdale, Mich. The common stock amounts to $48,000 and the preferred to $137,000.